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Assessment of Intrapartum Nurses' Beliefs Related to Birth Practices

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ASSESSMENT OF INTRAPARTUM NURSES' BELIEFS RELATED TO BIRTH PRACTICES

by

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A Doctoral Project
Submitted to the Graduate School,
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at The University of Southern Mississippi
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Nursing Practice

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ABSTRACT

Intrapartum nurses' beliefs influence nursing behavior and nursing interventions during labor and birth. Assessing these beliefs in a regional hospital in the Southeastern United States was the focus of the doctoral project. Before the project, there was no objective data that assessed individual nurse's beliefs and birth practices in the labor and delivery unit, or among the nursing staff as a whole. A knowledge gap existed in understanding if the nursing culture valued, promoted, and supported intended vaginal birth. Nursing leadership recognized that the overall cesarean birth rate and primary cesarean birth rate in the hospital were similar to State statistics and desired implementation of *Safe Reduction of Primary Cesarean Births: Supporting Intended Vaginal Births* (2015) patient safety bundle in the labor and delivery unit. Establishing a clear understanding of whether nurses' beliefs aligned more with medicalized birth practices or normal birth practices provided valuable information for leadership and began the first step of implementation, Readiness. The Intrapartum Nurse's Beliefs Related to Birth Practices (Adams, 2012) instrument was utilized to establish that 93% of nurses who participated in the survey have birth beliefs that more closely align with normal birth practices. The results of the survey illustrate that the nursing culture values normal birth. Study results indicate that the intrapartum nurse culture is ripe for presenting education and training that builds knowledge and skills to support intended vaginal birth. Understanding the relationship of beliefs related to practice is key to predicting future intentions of care. Recommendations and the next steps to utilizing the patient safety bundle are discussed.

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LIST OF ABBREVIATIONS

AIM	Alliance for Innovation on Maternal Care
ALSO	Advanced Life Support in Obstetrics
AWHONN	Association of Women's Health, Obstetrics, and Neonatal Nursing
CDC	Centers for Disease Control and Prevention
DNP	Doctor of Nursing Practice
EFM	Electronic Fetal Monitoring
IP	Intrapartum
IPNBBP	Intrapartum Nurse's Beliefs Related to Birth Practice
MSDH	Mississippi State Department of Health
MSPQC	Mississippi Perinatal Quality Collaborative
NTSV	Nulliparous Term Singleton Vertex
RN	Registered Nurse
TPB	Theory of Planned Behavior
VBAC	Vaginal Birth After Cesarean Section

CHAPTER I - INTRODUCTION

Background and Significance

The purpose of the doctoral project was to increase understanding of intrapartum (IP) nursing culture related to birth in a labor and delivery unit. Beliefs of IP nurses related to birth practices were determined to either support medicalized birth practices or support normal birth practices. The context for discussion of normal labor and birth refers to the healthy physiologic process of labor and childbirth. Normal labor and birth include spontaneous labor and vaginal birth at term with minimal interventions.

The National Partnership for Maternity Safety calls unnecessary cesarean birth a "preventable cause of maternal morbidity and mortality and reduction of cesarean birth rates as an important strategy to improve women's health" (Lagrew et al., 2018, p. 503). In seeking solutions, The National Partnership for Maternity Safety appointed a national workgroup to support maternal safety and quality improvement initiatives that are data-driven, Alliance for Innovation on Maternal Care (AIM). The interdisciplinary workgroup comprises representation from women's healthcare professionals and consumers. AIM developed a patient safety bundle focused on reducing the number of primary cesarean births; many tools adopted from the California Perinatal Quality Care Collaborative. The consensus patient safety bundle outlines critical practices for implementation in maternity units across the United States and is easily accessible through the National Partnership for Maternity Safety/AIM website (Lagrew et al., 2018).

Safe Reduction of Primary Cesarean Births: Supporting Intended Vaginal Births (2015) safety bundle is systemized into four domains—Readiness, Recognition and Prevention, Response, and Reporting and Systems Learning (Figure 1). The first domain,

Readiness for every patient, provider, and facility, focuses on three areas that need to be addressed to successfully move into the second domain. The areas include building a culture that values, promotes, and supports intended vaginal birth while understanding the risks of unnecessary cesarean birth, engaging patients and families in decision-making about normal birth, and utilizing skills and knowledge training for providers to optimize support for vaginal birth (Council on Patient Safety in Women's Health, 2015).

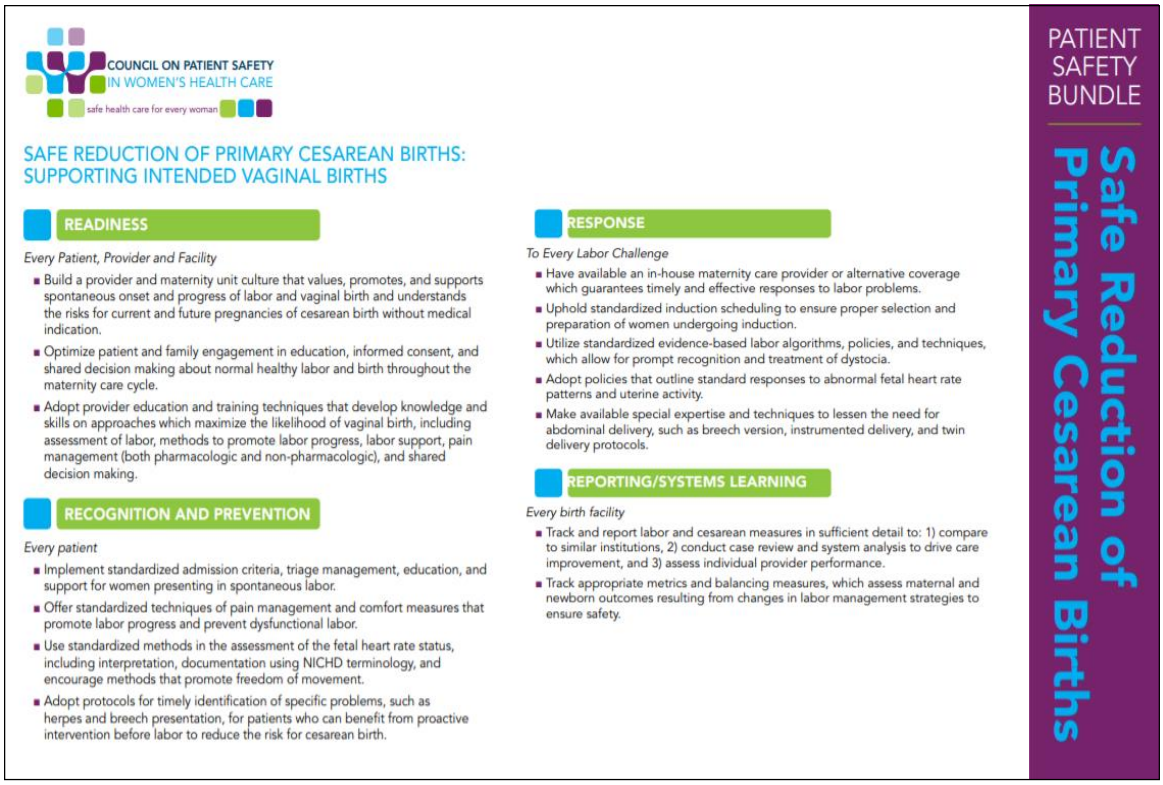


Figure 1. Safe Reduction of Primary Cesarean Births: Supporting Intended Vaginal Births

(Council on Patient Safety in Women's Health, 2015, p. 1).

Providers working in a maternity unit have beliefs that form a culture about birth. IP nurses' beliefs influence nursing behavior and nursing interventions during labor and birth. Assessing these beliefs in a regional hospital in the Southeastern United States was the focus of the doctoral project. Before the project, there was no objective data that

assessed individual nurse's beliefs and birth practices in the labor and delivery unit, or among the nursing staff as a whole. A knowledge gap existed in understanding if the nursing culture valued, promoted, and supported intended vaginal birth. Nursing leadership recognized that the overall cesarean birth rate and primary cesarean birth rate in the hospital were similar to State statistics and desired implementation of *Safe Reduction of Primary Cesarean Births: Supporting Intended Vaginal Births* (2015) patient safety bundle in the labor and delivery unit. Since IP nurses are the largest number of providers on the unit, focusing on the nurse population was chosen as the group with which to begin with the Readiness domain. A major objective of the project is to establish a clear understanding of whether nurses' beliefs are aligned more with medicalized birth practices or normal birth practices. Gaining insight regarding the level of alignment should provide valuable information for leadership. High-quality care integrates nursing care that supports normal physiologic birth (Carter et al., 2010; Romano & Buckley, 2016; Sakala et al., 2016). Understanding the relationship of beliefs related to practice is key to predicting future intentions for care and will guide the development of educational endeavors that support, promote, and value normal birth.

Evidenced-Based Practice Search

Data sources for the doctoral project include Cochrane Library, Pub Med, CINAHL, Association of Women's Health, Obstetrics, and Neonatal Nursing (AWHONN), National Partnership for Maternity Safety, AIM, American College of Nurse-Midwives, American College of Obstetricians and Gynecologists, Centers for Disease Infection and Control (CDC), Agency for Healthcare Research and Quality, and National Clearinghouse Guidelines. Searches were performed with the following

keywords: Reduction of cesarean birth/section/delivery, unnecessary cesarean birth/delivery/section, maternal morbidity and mortality, nurse/ing beliefs and culture, maternity culture, intrapartum nursing, instrument, normal physiologic birth, normal birth, nursing support women in labor, medicalized birth, cesarean versus vaginal birth/delivery, vaginal birth after cesarean, women in labor, nursing competence/skills, clinical decision-making, beliefs and culture, intrapartum nurses' beliefs, nursing change theory. All searches were performed for the English language only and included years 2001-2019. Initial searches yielded over 2,200 articles. The search was refined to include full text only and years 2010-2019, published in peer-reviewed journals and/original research with the following terms: normal birth, physiologic birth, medicalized birth, unnecessary cesarean, prevention/reduction cesarean, intrapartum nursing, and intrapartum nurse beliefs. Articles were not excluded based on study design or outcomes.

Synthesis of the Evidence

IP nurses have a significant influence on the labor and birth care of women and impact birth outcomes. The cesarean birth rate for women in the United States is one in three births, and the rate in Mississippi is higher than the national average (Centers for Disease Control and Prevention [CDC], 2019). Experts agree that a reduction in unnecessary cesarean births across the nation is imperative, but because it is a multi-faceted issue, there is no single solution. The *Safe Reduction of Primary Cesarean Births: Supporting Intended Vaginal Births* (2015) patient safety bundle is readily available as a resource for hospitals. The safety bundle provides a systemized approach for institutions to individualize education and skills training for providers that value, promote, and support normal birth. IP nurses have the largest presence of providers in most labor and

delivery units. A logical assumption was made that the IP nurse population was a valid place to begin the determination of beliefs to then develop recommendations for nursing education and skills training specific to the needs of the unit based on the National Partnership for Maternity Safety/AIM patient safety bundle. The beliefs of each IP nurse are influenced by the maternity culture in which each practice (Adams & Sauls, 2014b).

Population Health Impact

The maternal mortality rate in the United States is unacceptable and appears to be rising. Maternal deaths in 1987 were 7.2 women per 100,000 births and in 2013, 18.5 women per 100,000 births. The CDC (2018) estimates that there are over 700 maternal deaths in the United States every year and at least 60% of deaths are preventable. Merck for Mothers estimates that there are five near misses for every woman who dies in childbirth or pregnancy and over 50,000 women experience severe complications (CDC, 2017). Maternal mortality affects all women, but "the ratio is influenced by a higher rate of death among non-Hispanic Black, unmarried patients with unplanned pregnancies" (Moaddab et al., 2018, p. 1). Underserved populations with poor access or utilization of resources are at greater risk (Moaddab et al., 2018). According to the *Mississippi Maternal Mortality Report 2019* (Figure 2), the pregnancy-related mortality ratio for Black women ranged from 51.9 to 64.1 deaths per 100,000 live births between 2013 and 2016; the mortality ratio for White women ranged from 18.9 to 36.7 deaths per 100,000 live births (Mississippi State Department of Health [MSDH], 2019).

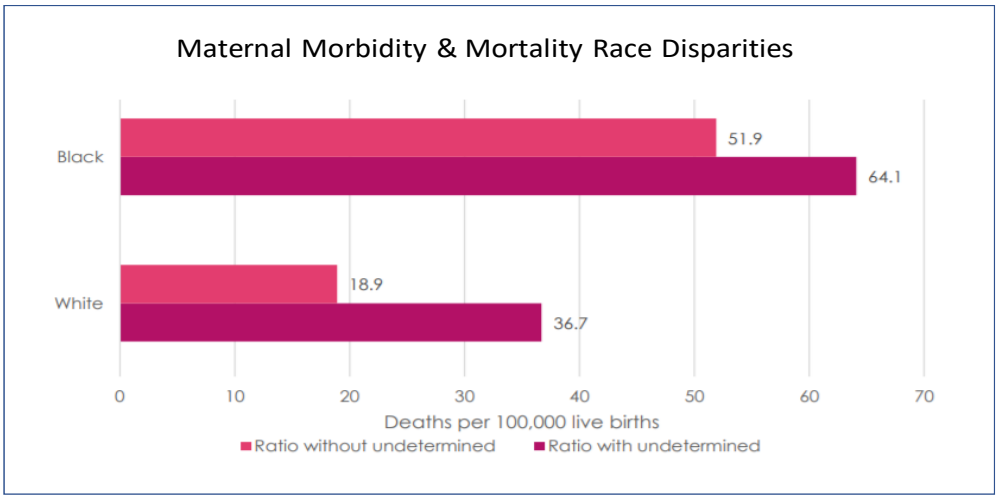


Figure 2. Pregnancy-Related Death by Race in Mississippi

(MSDH, p. 12, 2019).

The short-term morbidity and mortality associated with cesarean birth include longer hospital stay, increased postpartum blood loss, infection, sepsis, and venous thrombosis. Long-term complications in subsequent pregnancies include abnormal placental implantation and increased risk of hemorrhage, hysterectomy, cardiac events, and death (Bauserman et al., 2015). Women and families may experience psychological implications. Cesarean birth can be lifesaving; however, commonplace use of unnecessary cesarean birth leads to serious safety issues in maternal health, contributing to maternal morbidity and mortality.

Cesarean Birth in the United States and Mississippi

The history of overall cesarean rate, vaginal birth after cesarean rate, nulliparous, term, singleton, vertex (NTSV) rate, and previous cesarean rate in the United States over the past 47 years is depicted in the figure below (Figure 3). Note the steep rise in overall cesarean birth and NTSV cesarean rates. The rates rose dramatically over a short time

and have remained steady over the past 10 years. The overall cesarean birth rate in the United States is now 31.9%; one in three women give birth by cesarean

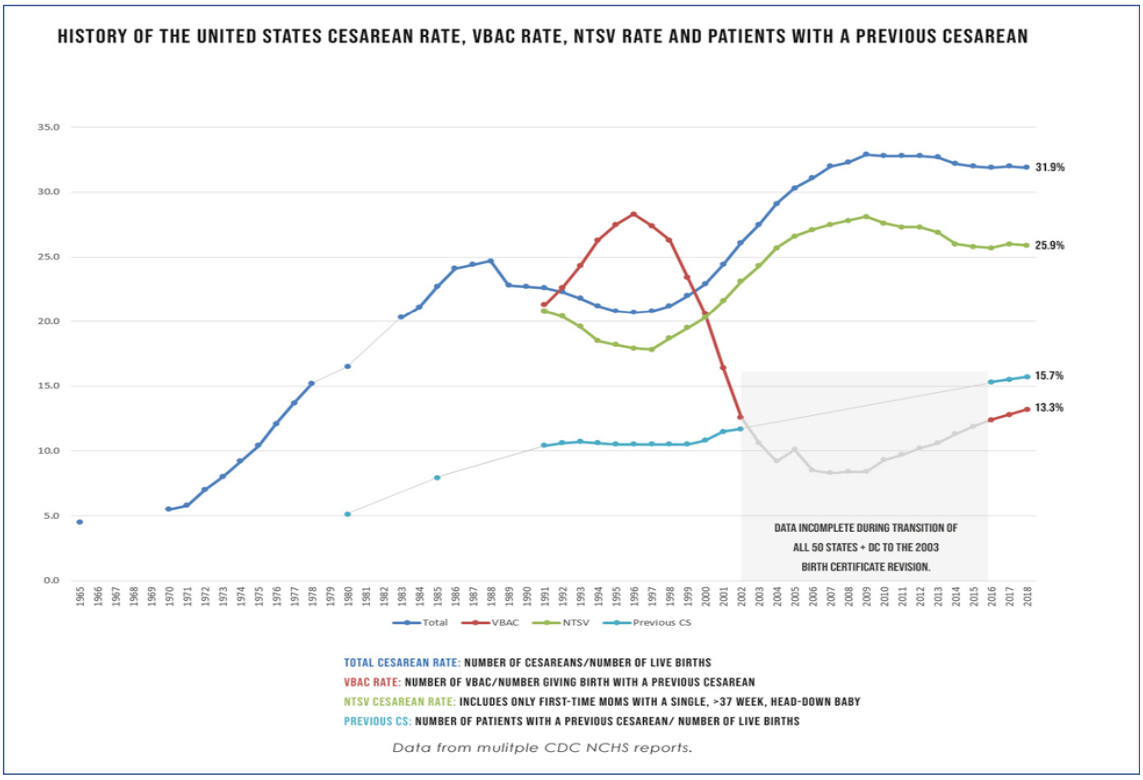


Figure 3. History of the United States Cesarean Rate, VBAC Rate, NTSV, and Patients with Previous Cesarean 1970-2018.

(Mississippi Perinatal Quality Collaborative [MSPQC] 2019).

(Martin et al., 2019). In Mississippi, the overall cesarean birth rate is the highest in the nation at 38.3% (CDC, 2019). The overall cesarean birth rates across the United States for 2017 are depicted state by state in the map below (Figure 4). Mississippi is one of eight states listed in the highest range. Greater than one in three women in Mississippi give birth by cesarean and the number varies greatly across the state depending on which hospital a woman chooses for her birth. According to the Mississippi Perinatal Quality Collaborative (MSPQC), Mississippi follows a pattern similar to many states across the United States in a wide variation of cesarean birth rates between hospitals. The overall

cesarean birth rate by hospital in Mississippi ranges from 25% to 54%, while the primary cesarean birth rates range from 14% to 37% with an average of 31.2% (MSPQC, 2019). In a single generation in the United States, the overall cesarean birth rate has increased by 500% and is the most common surgical procedure performed. As the rate of cesarean birth has risen, so has the rate of maternal morbidity and mortality. Many factors contribute to the rise in maternal morbidity and mortality, one factor is unnecessary cesarean birth.

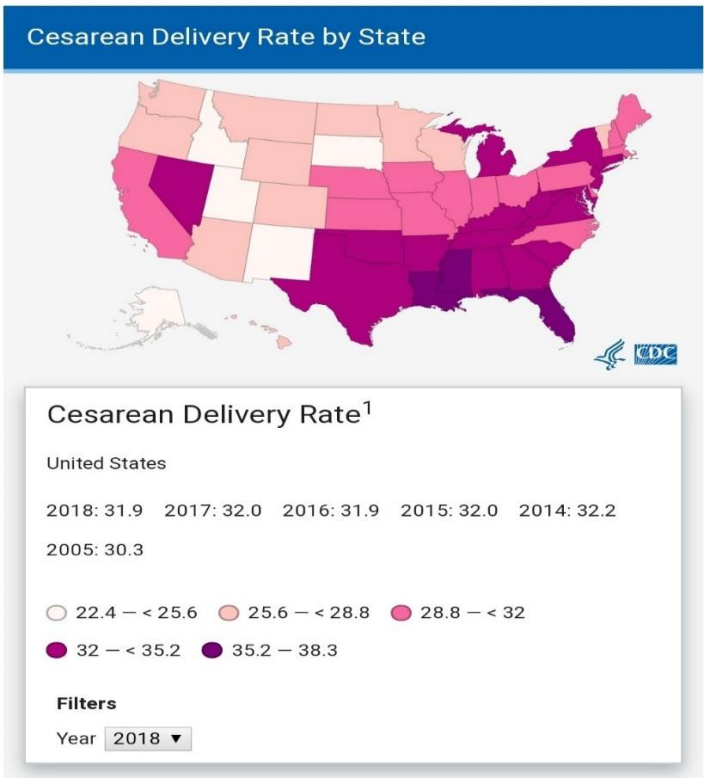


Figure 4. Cesarean Delivery Rates in the United States for 2005, 2014-2018 and Range of Cesarean Delivery Rate by State 2018.

(CDC, 2019).

Reduction of Primary Cesarean Birth

Pregnant women are at risk for complications that occur only during pregnancy, including morbidities associated with unnecessary cesarean birth. In 2012, the Eunice

Kennedy Shriver National Institute of Child Health and Human Development, the Society for Maternal-Fetal Medicine, and the American College of Obstetricians and Gynecologists joined together to address the topic of preventing the first cesarean. Essential points were identified to aid in the reduction of unnecessary cesarean birth. Experts agree that the cesarean birth rate is high in the United States, although there is no consensus of an acceptable rate (Spong et al., 2012). An increase in cesarean birth between 1996 and 2011 occurred "without clear evidence of concomitant decreases in maternal or neonatal morbidity or mortality raises significant concern that cesarean delivery is overused" (Caughey et al., 2014, p. 179). The most common indications for primary cesarean births are labor arrest (including failed induction of labor) and non-reassuring or indeterminant fetal heart rate tracing. The indications for primary cesarean birth are illustrated in the chart below (Figure 5).

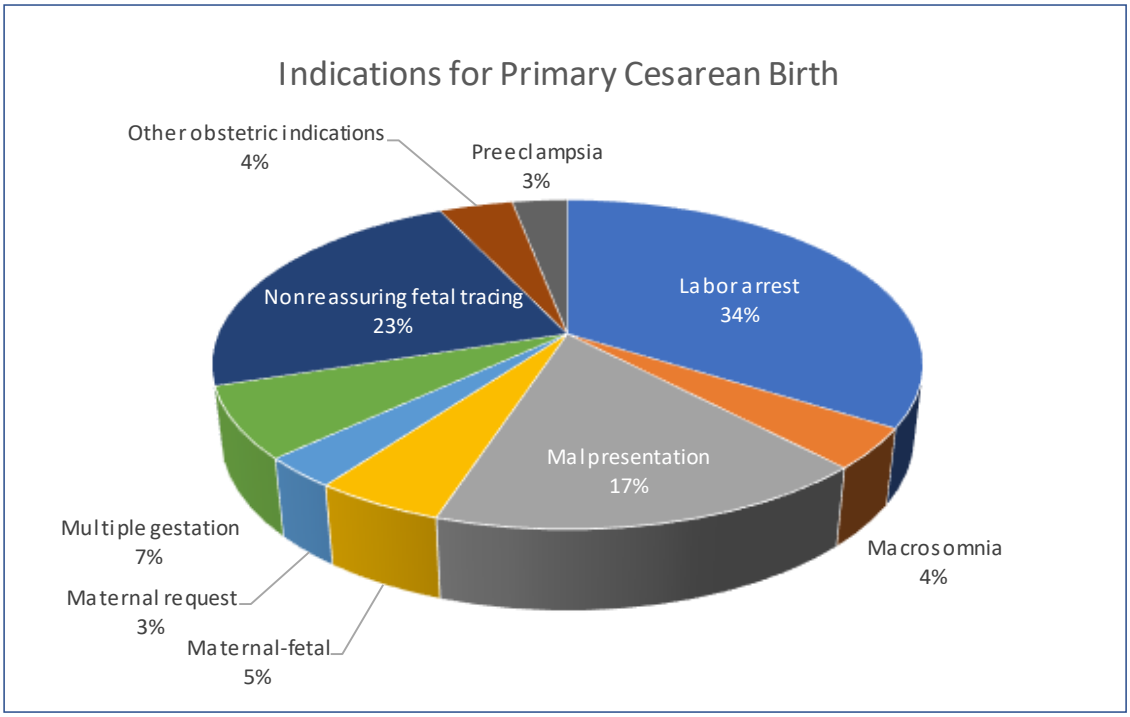


Figure 5. Indications for Primary Cesarean Delivery

(Barber et al., 2011, p. 14).

The group of women who have the most favorable conditions for a vaginal birth are nulliparous, term, singleton, vertex (NTSV) pregnancies and the population accounts for nearly 50% of all cesarean births (Hehir et al., 2018). The rate of NTSV cesarean birth in the United States between 2013 and 2018 was 25.9%, and the NTSV cesarean birth rate was 31.8% in Mississippi during the same period (MSPQC, 2019; Martin et al., 2019). Women with an NTSV pregnancy account for the most labor complications and are the population that will benefit most from targeted interventions that lower the cesarean birth rate. NTSV pregnancies are a population that can be compared across states, individual hospitals or healthcare systems, and providers. The goal of the patient safety bundle *Safe Reduction of Primary Cesarean Births: Supporting Intended Vaginal Births* (2015) is decreasing unnecessary primary cesarean birth and provided that the

number is reduced, over time the repeat cesarean rate will also decrease. The decrease in cesarean births would positively impact the maternal morbidity and mortality rates in the United States that are related to unnecessary cesarean birth, as well as reduce cost.

Intrapartum Nurse Impact on Cesarean Birth

In the United States, over 98% of births occur in hospitals and each of the facilities employs nurses for labor and delivery units. Nurses have a significant influence on the labor and birth care for women and impact birth outcomes (Adams et al., 2016; Smith et al., 2016). Nurses working in labor and delivery have many responsibilities, including providing emotional and physical support to women and families during the IP period. Nurses are particularly situated to provide support for the normal physiologic birth process and non-pharmacologic labor support for women because nurses are present at most births that occur in the United States. According to the Association of Women's Health, Obstetric, and Neonatal Nursing (AWHONN), "care and support" of women in labor are "powerful nursing functions" and hospitals are obligated to provide an environment that inspires a positive patient-nurse relationship during labor with appropriate nurse-patient ratio (Association of Women's Health, Obstetrics, and Neonatal Nursing [AWHONN], 2011, p. 665). AWHONN further supports evidence-based practices that facilitate normal physiologic labor and birth and continuous labor support for promoting patient safety (AWHONN, 2011). Nursing interventions that support normal birth can improve outcomes. Upright positions and walking during labor reduce the duration of labor, reduce the risk of cesarean birth, reduce epidural use, and have no association with increased interventions. Encouragement and support for women utilizing upright positions and walking are safe and do not contribute to negative outcomes

(Lawrence et al., 2013). Continuous labor support may increase spontaneous vaginal birth, provide a shorter length of labor, decrease cesarean birth, decrease operative vaginal birth, decrease the use of analgesia, decrease low five minute Apgar, and decrease negative maternal feelings about their birth (Bohren et al., 2017).

Nursing schools do not provide formal education for teaching skills to support the normal physiologic birth process or provide non-pharmacologic labor support. Nursing knowledge and skill are acquired 'on the job' and dependent on the unit orientation process, clinical experience, collegial support, unit culture, and continuing education opportunities. The necessary knowledge and skill for nurses to support the normal physiologic birth process are lacking within many labor and delivery units (Lagrew et al., 2018). Younger nurses may find it more difficult to gain knowledge and skills to support normal birth because of the high planned delivery, cesarean and epidural rates. Nurses in the regional hospital labor and delivery unit who were the focus of the project received no structured education on the physiologic birth process or non-pharmacologic labor support. Building a nursing culture within maternity care that supports normal physiologic birth and provides non-pharmacologic labor support may increase nursing confidence and is likely to lead to increased vaginal birth (Smith et al., 2016).

Normal Physiologic Birth

A maternity unit that is dedicated to promoting, supporting, and protecting normal physiologic labor and birth while utilizing technology and interventions judiciously can achieve high-quality care (Buckley, 2015). The normal birth process has benefits for both mother and baby. Benefits include "…promoting fetal readiness for birth and safety during labor, enhancing labor effectiveness, providing physiologic help with labor stress

and pain, promoting maternal and newborn transitions and maternal adaptations, and optimizing breastfeeding and maternal-infant attachment…" (Buckley, 2015, p. x). A woman's body prepares for labor and birth by increasing estrogen, oxytocin, and prostaglandin levels in the last weeks of pregnancy. The innate physiologic process supports cervical ripening, activates uterine oxytocin receptors for cervical ripening and effective contractions for labor and during the postpartum period to reduce bleeding, as well as provides a calming effect.

The process promotes spontaneous onset of labor and prepares the fetus to adapt to extrauterine life. Providing skin-to-skin interaction with mother and baby immediately following birth provides further benefits by nurturing oxytocin peak activity. The benefits include reduction of postpartum hemorrhage risk with the increased strength of contractions, newborn temperature mediation, hormonally-activated maternal-infant bonding, improved breastfeeding, and reduction of maternal and infant stress. Normal labor and birth are associated with decreased interventions that disrupt the birth process, decreased length of time in labor, decreased use of analgesia/anesthesia decreased operative vaginal birth, increased maternal satisfaction, improved breastfeeding and improved maternal-infant bonding (Buckley, 2015).

Medicalization of Birth

Scheduled birth and use of medications for the induction of labor interrupts the normal labor and birth process and can have negative consequences. For example, scheduled birth can lead to increased risk of failed induction of labor, increased risk of instrumental delivery, interruption to breastfeeding, maternal adaptation, and maternal-infant bonding. The use of synthetic oxytocin during labor does not provide the calming

and analgesic effects that endogenous oxytocin provides and may cause increased pain, uterine hyperstimulation, and disruptions to breastfeeding. Epidural anesthesia decreases the endogenous oxytocin and may slow labor, increase the need for augmentation, prolong the second stage of labor, increase the need for an operative vaginal birth, and interfere with maternal adaptations and attachments. Increased stress during labor may slow or stop contractions due to 'fight or flight' responses (Arendt & Tessmer-Tuck, 2013; Buckley, 2015). One intervention may lead to more interventions that can lead to poorer maternal and neonatal outcomes, most notably when planned birth is not medically indicated.

Tool for Evaluating Nurses' Beliefs Related to Birth Practice

IP nurses are integral to providing care for women during childbirth and influence decisions about birth practices. The beliefs a nurse has about birth influence decision-making and affect birth outcomes. Nurses' beliefs influence decisions supporting interventions that may optimize an outcome for an intended vaginal birth or an unnecessary cesarean birth. Generating data that establishes nurses' beliefs and practices provide necessary information for understanding the current maternity unit culture. An available reliable and validated instrument that measures beliefs of IP nurses is the Intrapartum Nurse's Beliefs Related to Birth Practice (IPNBBP) (Adams & Sauls, 2014b). The IPNBBP instrument was developed as a self-reporting instrument to "measure birth beliefs of the IP nurse related to birth practice" (Adams & Sauls, 2014a, p. 4).

Rationale

Theoretical Framework

The Theory of Planned Behavior (TPB) postulates a person's act of a given behavior is determined by the individual's attitude, intention, and behavior. The intention is influenced by three factors—perceived beliefs of the value of behavior or readiness to perform a certain behavior (behavioral beliefs), perceived beliefs of social norms (normative beliefs), and perceived beliefs of behavioral control to perform desired behavior (control beliefs). Beliefs produce behavioral intentions that bring about the performance of specific behaviors. The TPB posits that an individual's beliefs may be predictive of behavior and beliefs, intentions, and behavior are interconnected. The more favorable the attitude and norms, the more likely the individual is to have the intention to perform the behavior (Ajzen, 2011).

Behavioral beliefs illustrate whether an individual has a positive or negative belief related to behavior. For example, a nurse in labor and delivery may believe that supporting a woman in labor to change positions improves the chance of vaginal birth and provides comfort for the woman- a positive view of the nursing intervention. When the nurse provides the intervention, she must have a solid belief that her behavior is effective. Normative beliefs on a labor and delivery unit are guided by peers' beliefs; either aided or hindered. The nurse who desires to provide position changes for a woman in labor may be affected by peer pressure of other nurses who have a negative belief of the nursing intervention. Peer pressure may cause the nurse to doubt or discount her personal beliefs and choose not to provide the nursing intervention. Beliefs are not solely independent and rely on relationships with colleagues. Confidence drives control beliefs

and can be affected by either a weak or a strong sense of self. The three beliefs lead to actual behavioral control, which is made up of skills and resources that are necessary to enact behaviors. If the maternity unit has equipment that supports providing position changes for women, the nurse's intention to implement the intervention is strengthened. The nurse is more likely to provide options for position changes for women in labor if birthing balls, peanut balls, rocking chairs, and birthing bars are easily accessible on the unit (Adams & Sauls, 2014a; Ajzen, 2011)

TBP underpinned the doctoral project. Knowledge alone may not be enough to support a maternity culture that values, promotes, and supports intended vaginal birth. Positive behavioral beliefs and strong control beliefs are also needed. A clear understanding of the IP nurses' beliefs related to normal birth intention is necessary to develop successful education and skills training interventions that either support or change beliefs.

Specific Aims

The purpose of the project was to increase understanding of IP nursing culture related to birth in a labor and delivery unit utilizing the IPNBBP instrument and implement the *Safe Reduction of Primary Cesarean Births: Supporting Intended Vaginal Births* (2015) patient safety bundle. Beliefs guide a culture; recognition of beliefs and practices frame the maternity unit culture. Establishing a clear understanding of whether nurses' beliefs align more with medicalized birth practices or normal birth practices was necessary to implement the safety bundle. Objective data that addressed nurses' beliefs and practices in the chosen labor and delivery unit was not known. The gap in knowledge led to the question: Do IP nurses in labor and delivery have birth beliefs related to birth

practices that support medicalized birth or normal birth? Answering the question bridged a gap in knowledge and provided the desired information for leadership in labor and delivery to distinguish links between birth beliefs, practices, and outcomes. The information combined with demographic data can be used to develop successful educational endeavors specific to the unit that support intended vaginal birth.

Doctor of Nursing Practice Essentials

The following Doctor of Nursing Practice (DNP) Essentials were met during the project:

- Essential I: Scientific Underpinnings for Practice
    - Addresses current practice issue that requires a strong scientific foundation
- Essential II: Organizational and Systems Leadership for Quality Improvement and Systems Thinking
    - Focuses on a target population to meet the needs of the population
- Essential III: Clinical Scholarship and Analytic Methods for Evidence-Based Practice
    - Integrates knowledge from diverse disciplines applied to practice issue
- Essential VII: Clinical Prevention and Population Health for Improving the Nation's Health
    - Approaches a practice issue from a population health perspective

Summary

In summary, experts agree that the cesarean birth rate in the United States is higher than necessary and contributes to morbidity and mortality in maternity care. The

patient safety bundle *Safe Reduction of Primary Cesarean Births: Supporting Intended Vaginal Births* (2015) provides critical practices that can be adopted across maternity units. Recommendations for implementing the safety bundle include building a hospital culture that values, promotes, and supports intended vaginal birth for successful implementation of practice and policy change that will lead to the reduction of primary cesarean births. Nursing leadership requires a clear understanding of nursing culture related to birth to support the development of evidence-based education and skills training for IP nurses and an evaluation of current practices and policies.

CHAPTER II – METHODOLOGY

Process

Context

The priority patient population for the reduction of primary cesarean birth is women with NTSV pregnancies. However, the population of focus for the doctoral project was IP nurses working in labor and delivery at a Southeastern regional hospital in the United States. An initial needs assessment by hospital nursing leadership established a priority request for information to aid in implementing the patient safety bundle *Safe Reduction of Primary Cesarean Births: Supporting Intended Vaginal Births* (2015), beginning with an evaluation of the current maternity unit nursing culture. The project was governed by an overarching logic model, located in Appendix A, which includes all planning and implementation aspects of the project.

Population

The sample included all registered nurses (RNs) who worked in the regional hospital's labor and delivery unit. IP nurses attend approximately 1,300 births annually. The RN staff of 36 included 18 full-time, 4 part-time, and 10 as needed employees, as well as the Director of Women's Health, the unit Manager, Coordinator, and Educator. Inclusion criteria included staff RN or management RN for labor and delivery with current state RN licensure who worked at the regional hospital during the study period. Exclusion criteria included patients, all staff or employees in labor and delivery who were not RNs, and RNs without current licensure. General demographics, education level, and experience with IP nursing were unknown.

Setting

The setting was a regional hospital in the Southeastern United States. The not-for-profit hospital and medical complex with 303 licensed beds, a state-designated Level II Trauma Center, and Level III Neonatal Intensive Care Unit. The system has 3,300 employees and is accredited by the Joint Commission, the Commission on Cancer, the College of American Pathologists, and the American College of Radiology. The hospital has eight labor and delivery rooms, three triage rooms, and two operating rooms located on the labor and delivery unit. Key stakeholders include Vice President of Patient Care, Quality, and Customer Satisfaction, Director of Women's and Children's Services, Manager, Educator, Coordinator, and RN staff for the labor and delivery unit.

Intervention

The instrument utilized for the project was the electronic administration of the IPNBBP survey, and the intervention was the implementation of the patient safety bundle. The survey was developed by Dr. Ellise D. Adams and is a reliable and validated tool (Adams & Sauls, 2014b). Dr. Adams gave permission for use of the instrument/survey for the project (Appendix B). The survey was hosted by The University of Southern Mississippi's Qualtrics system (Appendix D). Three sections define the survey. Survey section I included demographics, nursing education/certification, IP nurse experience, and current work environment data. Survey Section II consisted of 28 questions that use the Likert Scale 1-6. Two open-ended questions completed section III of the survey. Scoring for section II ranged from 28-168. A lower score indicated the nurse is more aligned with medicalized birth beliefs and a higher score indicated the nurse is more aligned with normal birth beliefs. The survey

took approximately 15 minutes to complete. The administration of the IPNBBP survey implemented the patient safety bundle.

The instrument was administered over three weeks. The timeframe for the survey was September 30 through October 21, 2019. This project and process were approved by the hospital Research Oversight Committee and The University of Southern Mississippi Internal Review Board. A recruitment flyer describing the survey was posted in labor and delivery before notification by email. The Director of Women's and Children's Services sent a pre-survey email announcing the voluntary, anonymous survey. An email was sent using a hospital email system to all labor and delivery nurses with a link to the consent and IPNBBP survey. A copy of the consent form and survey instrument is available in Appendix D. A reminder email was sent at the beginning of weeks two and three.

Analysis and Ethical Considerations

Analysis of descriptive statistics was reported concluding the results of the survey. Participation in the survey was voluntary, and no compensation or incentives were offered. Participants could refuse to take part, skip questions, or exit the survey at any time without penalty. The participants received no direct benefits for participation in the research study; however, survey results may help leadership better understand the maternity nursing culture on the unit and the information could influence future education or training activities made available to participants. Risks included the possibility of participants finding some questions sensitive or may have elicited an emotional discomfort related to their personal birth experience or nursing experience.

Surveys were initially stored with Qualtrics in a password protected electronic format using The University of Southern Mississippi. Data were later downloaded and

stored under password protection and without identifying information. Completed surveys were not downloaded. Name, email address, and Internet Protocol address identifiers were not collected. Confidentiality was maintained. All survey responses are to be deleted six months after all graduation requirements have been met.

Evaluation

Data from the IPNBBP were analyzed and interpreted to establish IP nurses' beliefs for birth practices in the labor and delivery unit. Proposed outcomes were either beliefs that support medicalized birth practices or beliefs that support normal birth practices. Demographics including age, gender, race, personal birth history, nursing education and nursing certification, years of IP experience, and current work environment were also analyzed for patterns.

Objectives

- Administer the IPNBBP instrument to RNs working in labor and delivery
- Determine if the nurses in labor and delivery have beliefs that support medicalized birth practices or normal birth practices
- Understand the demographic dynamics of the nurses who work in labor and delivery
    - Age, gender, and race
    - Personal birth history, nursing education, and nursing certification
    - IP nurse experience
    - Current IP work environment
- Develop recommendations for nursing education and skills training specific to the needs of the unit that value, promote, and support normal birth

Project Timeline

The projected timeline for the doctoral project was as follows. First, the project was proposed to the Faculty Committee on July 22, 2019. Next, a meeting with the hospital Research Oversight Committee took place on July 29, 2019, and letters of support to the University Internal Review Board were obtained by August 31, 2019. The application to The University of Southern Mississippi Internal Review Board was submitted on September 9, 2019. Implementation of the survey occurred September 30 through October 21, 2019. Data analysis was completed on December 1, 2019. The final doctoral project paper was submitted to the Project Chair on January 21, 2020, for review. Lastly, the project paper was submitted to the Graduate School Committee on February 14, 2020. An Executive Summary was submitted to the hospital Research Oversight Committee on February 24, 2020. Dissemination of the project was on February 28, 2020, during The University of Southern Mississippi DNP Scholarship Day.

Summary

An initial needs assessment by hospital nursing leadership influenced the research question for the project and directed the population and setting for the intervention. The objectives and timeline were guided by the logic model. Each objective was met, and the timeline was followed as stated. Implementation and survey results are discussed in Chapter III.

CHAPTER III –IMPLEMENTATION AND SURVEY RESULTS

Implementation

Recruitment from the sample of 36 RNs in labor and delivery at a regional hospital started with six laminated fliers posted throughout common areas and announcement boards on the unit (Appendix E). One flier was placed in a plastic stand in a basket near the nurses' station with candy in the basket. The Director of Women's and Children's Services sent an email to the sample population announcing the voluntary, anonymous survey the week before the survey start date. On September 30 at 6:00 a.m., a separate email was sent to the sample population through the Qualtrics system announcing the survey was open and a link was provided to the survey as planned. Reminder emails with a link to the survey were sent 7 days, 14 days, and 18 days from the day the survey opened to nurses who had not completed the survey. The reminder emails were also sent using the Qualtrics system to maintain confidentiality and were sent only to nurses who had not completed the survey.

The researcher was present on day and night shifts for several hours on 11 days during the three-week survey to recruit nurses and answer questions regarding the purpose of the survey and link to the survey. One of the recruitment days, pizza parties were given for the day shift and the night shift; recruitment fliers were placed on all pizza boxes as a reminder of the survey dates. An automated email was sent to nurses who finished the survey thanking them for taking the time to complete the survey. The survey closed at midnight on October 21, 2019, and laminated recruitment fliers were removed from the labor and delivery unit the following day.

Process

Recruitment efforts led to 29 nurses taking the survey, of which 27 completed the survey in its' entirety; one completed only demographic information and one completed three-quarters of the survey. The two individual surveys were discarded before data analysis due to incomplete information from respondents. The overall response rate was 80.5%, and after the two incomplete surveys were eliminated, the response rate was 75% from the sample population.

Demographic Data Descriptive Statistics (Survey Section I)

Age/Gender/Race

Examination of responses from the 27 respondents revealed none were less than or equal to 20 years of age, or greater than or equal to 60 years of age. Respondents between 30 and 60 years of age accounted for 77.7% (n=21) of respondents, while 18.52% (n=5) were aged 21-29, 33.3% (n=9) were aged 30-39, 11.11% (n=3) were aged 40-49 years, 33.33% (n=9) were aged 50-59 years, and 3.7% (n=1) were aged 60-69 years. All respondents self-identified as female gender. Among respondents, 88.89% (n=24) self-identified as White/Caucasian, 7.41% (n=2) Black/African American, and 3.7% (n=1) responded other and self-identified as Asian.

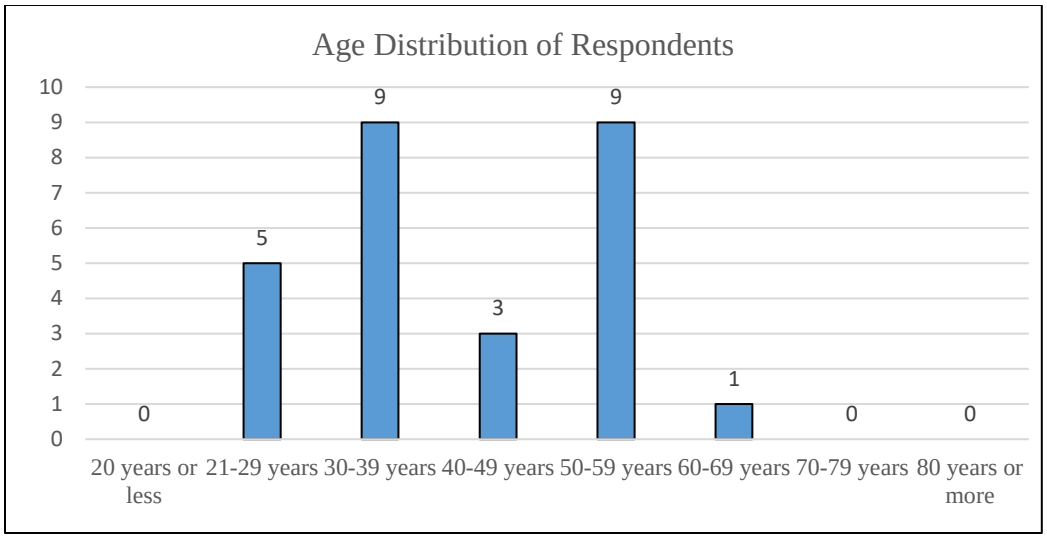


Figure 6. IPNBBP Survey Results: Age Distribution

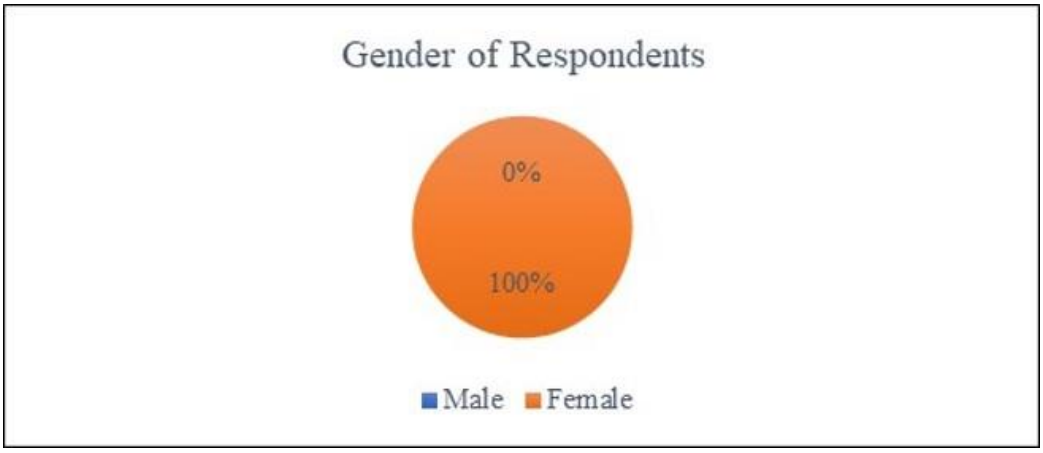


Figure 7. IPNBBP Survey Results: Gender

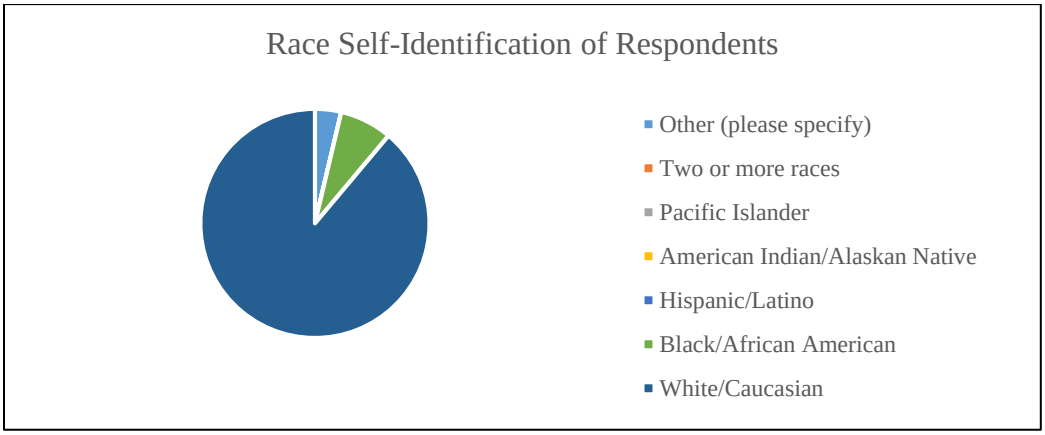


Figure 8. IPNBBP Survey Results: Race Self-Identification

Personal Birth Experience

Respondents who had a history of giving birth themselves constituted 80.7% (n=25) of the IP nurses surveyed. Respondents who had given birth did so by forceps at a rate of 4% (n=1), vaginally at a rate of 64% (n=16), and by cesarean at a rate of 32% (n=8). Some respondents gave birth by more than one route. No respondents had given birth by vacuum assistance, although one respondent commented she experienced a failed vacuum birth, and 19.3% (n=6) of all respondents had not personally given birth. Almost 76% (n=19) of respondents who had given birth would describe their birth experience as positive, 20%% (n=5) as a negative experience, 6.3% (n=1) as other, and 3.7% (n=1) responded N/A. In the other category, two respondents answered: 1. “Sad then happy. Spinal didn’t work and I missed my babies’ first cries.” 2. “My water was (sic) broke for 36 hours. My Pitocin wasn’t started for over 16 hours. I had a stat c/s after 1.5 hours of pushing. My son needed IV antibiotics until discharge.”

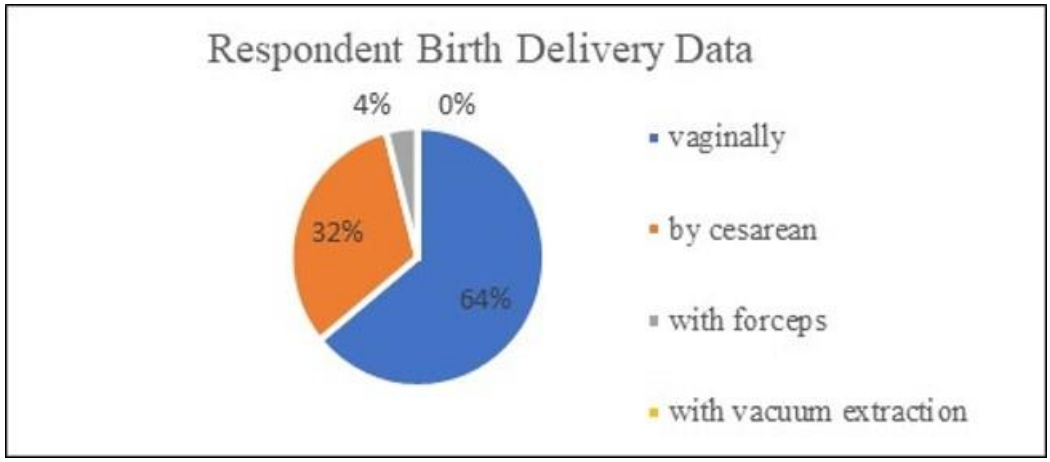


Figure 9. IPNBBP Survey Results: Birth Delivery Data

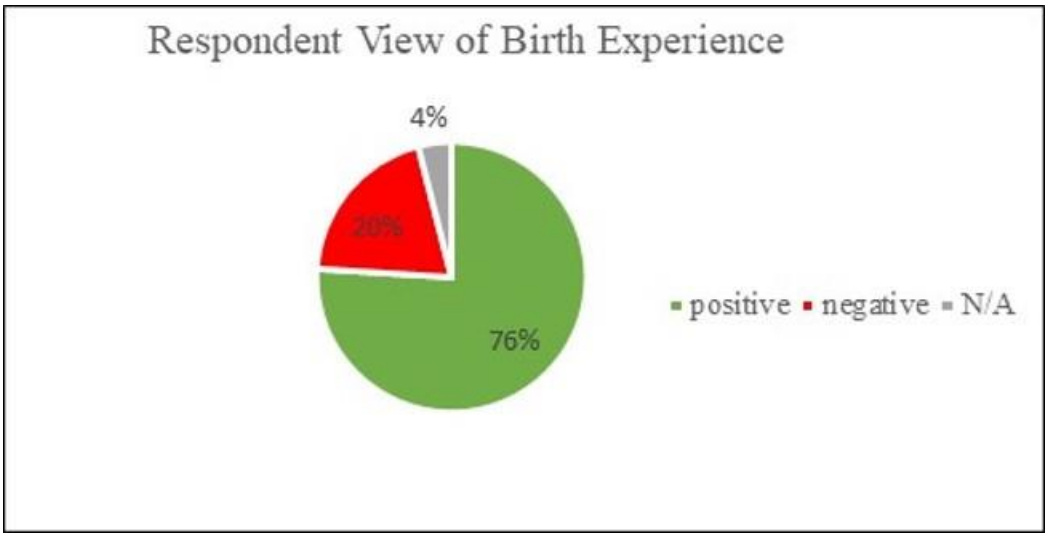


Figure 10. View of Birth Experience

Nursing Education and Certification

Respondents who earned a Bachelor of Science in Nursing constituted 66.7% (n=18) of IP nurses. Respondents who earned an Associate Degree in Nursing constituted 40.7% (n=11), 7.4% (n=2) reported having a bachelor's degree in a field other than nursing, 3.7% (n=1) reported having a Doctor of Nursing Practice degree, and 3.7% (n=1) responded: "currently enrolled as MSN, FNP student." No respondents reported having a diploma of nursing degree, Master of Science in Nursing degree, Doctor of Philosophy in Nursing degree, or Doctor in Nursing Science degree.

Out of the 27 respondents, 92.6% (n=25) reported holding at least one certification in their field. Respondents who have Electronic Fetal Monitoring (EFM) Certification constituted 55.6% (n=15), Inpatient Obstetric Nursing Certification 11.1% (n=3), provider training for Advanced Life Support in Obstetrics (ALSO) 63% (n=17), and 11.1% (n=3) reported as being certified as a Childbirth Educator. Of the 3 respondents who answered Childbirth Educator, one reported being certified by Prepared Childbirth Educators, one did not list the certifying body, and one listed Certified

Lactation. In the category of other, Neonatal Resuscitation Program and Advanced Cardiac Life Support were listed; both certifications are required for all nurses working in labor and delivery, including new hires.

Intrapartum Nursing Experience

Over half of respondents (55%) had six years or less of experience as an IP nurse. Respondents who had 0-2 years of IP experience made up 18.5% (n=5), while 11.1% (n=3) had 3-4 years, 25.9% (n=7) had 5-6 years of experience, 3.7% (n=1) had 9-10 years of experience, 7.4 %(n=2) had 11-12 years of experience, 3.7% (n=1) had 13-14 years of experience, 3.7% (n=1) had 15-16 years of experience, 7.4% (n=2) had 17-18 years of experience, 3.7% (n=1) had 21-22 years of experience, 7.41% (n=2) had 23-24 years of experience, and 7.4% (n=2) had 25-30 years of experience. No respondents responded in the category of 7-8 years, 19-20 years, or greater than 30 years of IP nursing experience.

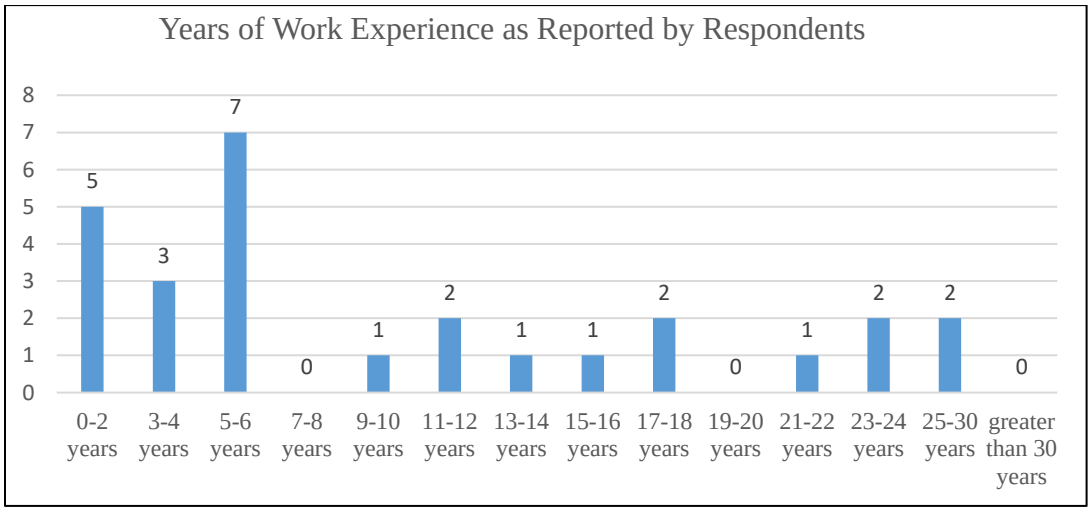


Figure 11. IPNBBP Survey Results: Work Experience

All respondents reported having experience with elective inductions of labor, augmented labors, cesarean birth, epidural anesthesia, unmedicated vaginal birth, vacuum extraction, episiotomy, ambulation for labor, continuous EFM, laboring down, birth

plans, and working with obstetricians. Respondents who reported having experience caring for women during an elective cesarean birth accounted for 96.3% (n=26) and 85.2% (n=23) reported having experience with forceps delivery. IP nurses with intermittent EFM experience constituted 96.3% (n=26) of respondents, 74.1% (n=20) reported having experience with closed glottis pushing, 70.4% (n=19) had experience with open glottis pushing, and 92.6% (n=25) had experience with doulas. Respondents who reported having experience with the use of breathing and relaxation techniques constituted 96.3% (n=26), 18.5% (n=5) reported having experience with hydrotherapy, 3.7% (n=1) had experience with water birth, and 77.8% (n=21) reported having experience with encouraging upright positioning during labor and birth. Respondents who reported having experience working with certified nurse-midwives accounted for 48.2% (n=13) of respondents, while 18.5% (n=5) reported having experience with certified midwives and certified professional midwives, 14.8% (n=4) reported having experience with lay midwives, 33.3% (n=9) reported having experience with family physicians, 25.9% (n=7) reported having experience with obstetric medical students and residents, and 3.7% (n=1) reported having experience with home birth. None of the respondents reported having experience with free-standing birth centers. All respondents reported having attended at least one continuing education event related to IP nursing in the past two years.

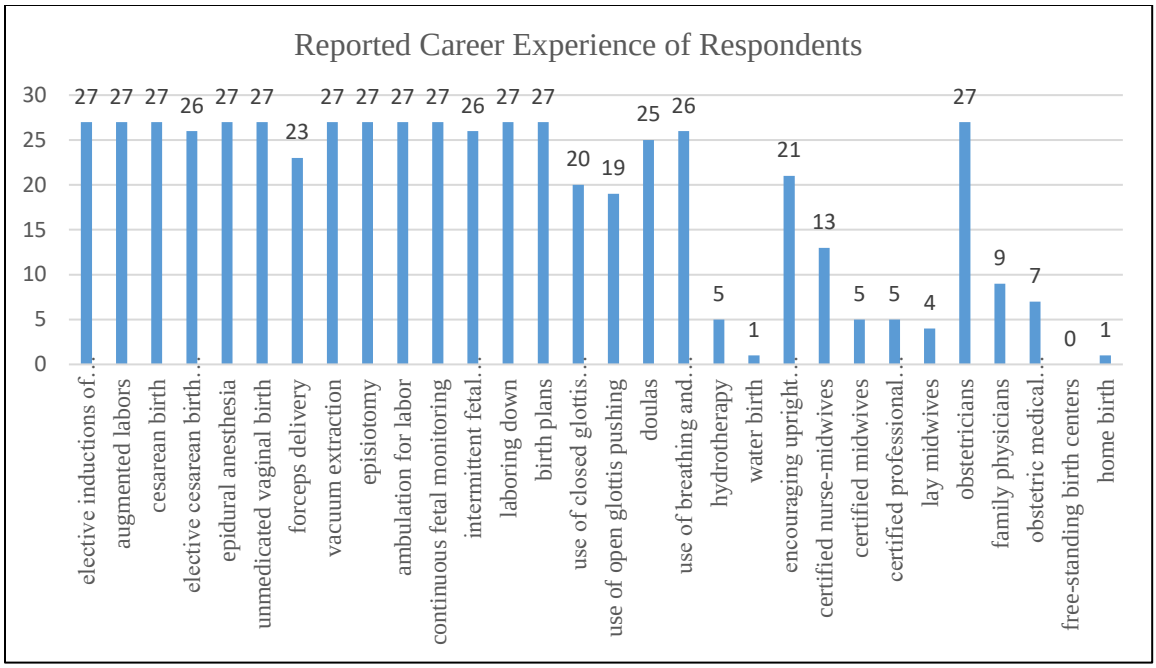


Figure 12. IPNBBP Survey Results: Career Experience

Current Work Environment

All survey participants worked at the same hospital in the same labor and delivery unit and 64.7% (n=22) of respondents identified their hospital of employment as a community hospital, while 5.9% (n=2) identified the same hospital as a private hospital. Respondents who identified the hospital as a level II hospital accounted for 23.5% (n=8), while 2.9% (n=1) identified the hospital as a level III, and 2.9% (n=1) identified the hospital as other ("county"). Respondents who considered the hospital to be urban constituted 85.2% (n=23), rural 4% (n=2), rural critical access 3.7% (n=1), and other ("city/county") 3.7% (n=1). All respondents reported working with obstetricians, 7.4% (n=2) with family physicians, and 11.1% (n=3) with certified nurse-midwives as birth attendants.

Respondents who reported the annual number of births at the regional hospital to be 1001-2000 accounted for 77.8% (n=21), while 7.4% (n=2) reported the number of

annual births to be up to 500 births, 11.1% (n=3) 501-1000, and 3.7% (n=1) greater than 2000 births annually. As previously stated in the Methodology section, the annual number of births in the regional hospital is 1300 births. Three-quarters of respondents correctly identified the annual birth rate, and 66.7% (n=18) of respondents estimated the percentage of cesarean births monthly between 31-50%. Respondents who reported the cesarean rate between 31% and 40% constituted 44.4% (n=12), while 11.1% (n=3) reported a rate of 10-20%, 3.7% (n=1) a rate of greater than 51% and no respondents responded below 10%.

Among respondents 55.6% (n=15) estimated the percentage of elective inductions (not medically indicated) per month to be greater than 51%. Respondents who estimated the percentage of elective inductions below 10% accounted for 7.4% (n=2), while 3.7% (n=1) estimated 10-20%, 11.1% (n=3) estimated 21-30%, 11.1% (n=3) estimated 31-40%, and 11.1% (n=3) estimated 41-50%. Respondents who estimated the rate of patients who use epidurals for pain relief as greater than 60% was 81.5% (n=22), while 3.7% (n=1) estimated the epidural rate at 21-40%, 14.8% (n=4) at 41-60%, 51.9% (n=14) 61-80%, and 29.6% (n=8) estimated the rate as greater than 80%. All respondents estimated that continuous EFM (for at least one-third to half of labor) was utilized for more than 70% of patients.

IP nurses who responded that the facility has documentation methods that include a mechanism for charting supportive, non-technical interventions used for patients were 85.2% (n=23). Respondents who disagreed and reported that the facility does not have methods for documentation of supportive, non-technical interventions used for patient comfort accounted for 14.8% (n=4). Respondents who reported the typical nurse/patient

ratio in the facility as one nurse to two patients accounted for 81.5% (n=22). The remainder of respondents either reported a one-to-one ratio or a 1 to 3 nurse/patient ratio.

IPNBBP Survey (Survey Section II)

Aggregate Data

The total scores for the 28 questions in section II of the IPNBBP can range from 28-168. Reverse scoring was utilized before data analysis for items indicating medicalized beliefs. Lower scores more closely aligned with medicalized beliefs of the IP nurse and higher scores aligned with normal birth beliefs. The number of high score respondents was 25 (93%) with a mean among the high scores of 132.4 and a standard deviation of 8.52. The high score among the higher score range (112 to 168) was 152, while the lowest was 116. The number of lower scores (range 28 to 111) respondents was 2 (7%) with a mean among the low scores of 106 and a high and low score among the low scores of 106. Two respondents out of 27 more closely aligned with medicalized beliefs, although the two respondents' scores were borderline just below the cutoff for beliefs that more closely aligned with normal birth. The other 25 respondents' scores were within the range for their beliefs aligning with normal birth.

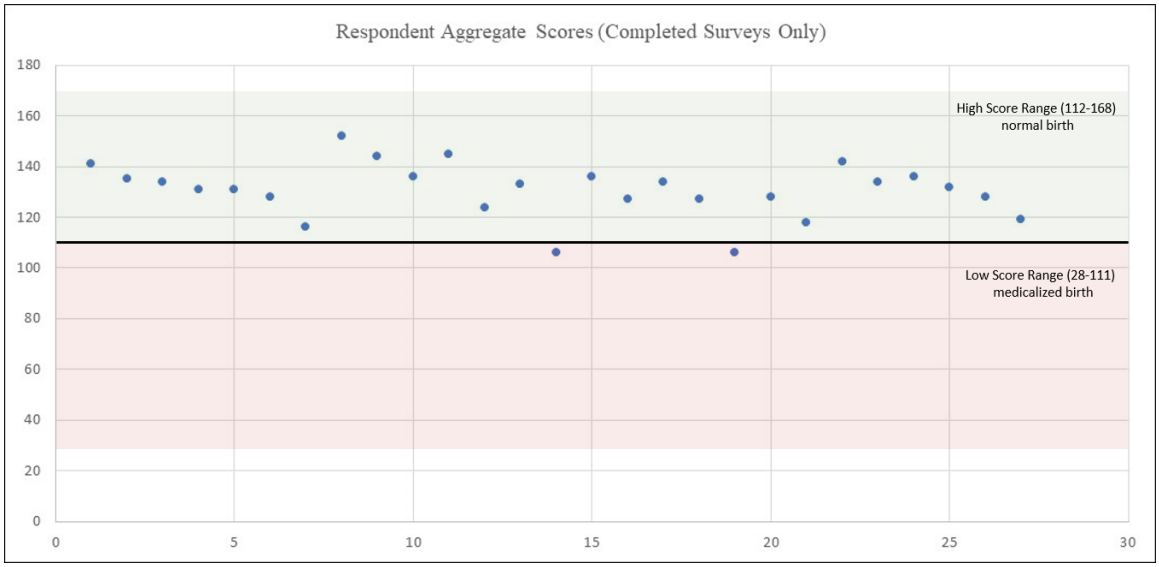


Figure 13. IPNBBP Survey Results (Section II): Beliefs Related to Birth Practices Subscale: Birth Beliefs Related to Medicalized Birth and Related to Normal Birth

The 28 questions for section II of the IPNBBP survey were divided into two sub-scales; 11 questions for birth beliefs related to medicalized birth and 17 questions for birth beliefs related to normal birth. The first sub-scale was comprised of 11 questions. Lower scores, ranging from 11 to 33 indicate that the IP nurse's birth beliefs more closely aligned with medicalized birth. A score greater than 33 is considered a high score and more closely aligned with birth beliefs related to normal birth. Results show 27 higher scores with the mean among high scores of 47.3, the standard deviation of 7.0, high score 59, and low score among higher scores of 34. All respondents in the subscale reported having birth beliefs related to normal birth.

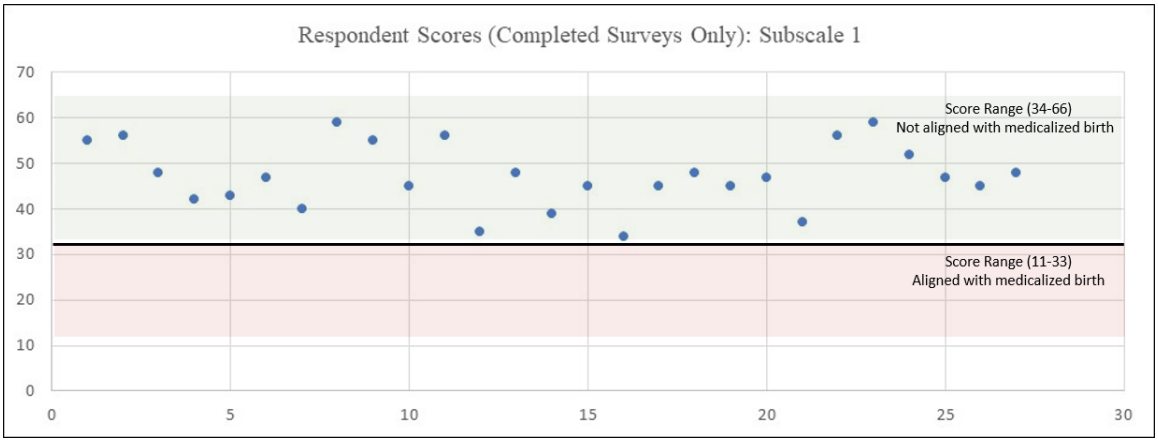


Figure 14. IPNBBP Survey Results: Subscale Medicalized Birth

The second sub-scale was comprised of 17 questions. Scores ranging from 68 to 102 were considered high scores and indicate that the respondent's birth beliefs are more closely aligned with normal birth. A score of less than 68 was considered a low score and more closely aligned with birth beliefs related to medicalized birth. Results revealed 25 higher scores (93%) with the mean among high scores of 81.5, the standard deviation of 5.75, a high score of 93, and a low score among higher scores of 71. The average of the two lower scores was 64; a high score of 67, and a low score among lower scores of 61. The results were consistent with the overall scores for section II of the survey.

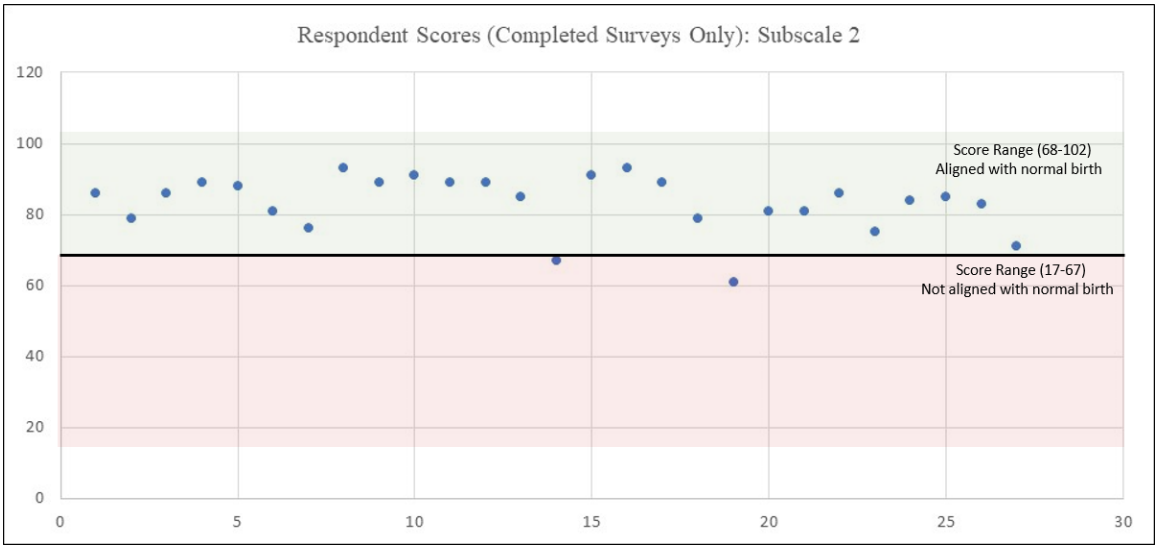


Figure 15. IPNBBP Survey Results: Subscale Normal Birth

IPNBBP Survey (Survey Section III)

Descriptive Statistics

Section III of the survey consisted of two open-ended questions. Completed surveys numbered 27 and two respondents typed in "N/A" to both open-ended questions; the remaining 25 respondents completed the statements. All responses are available in Appendix F and Appendix G. The first question is: *Complete the following statement. According to my beliefs related to birth practice, the birth process is*. Common responses to beliefs related to the birth process included birth as a natural, normal, physiologic process, and an exciting, exhausting, and empowering experience. Other respondents described a complex process that requires skill, knowledge, and competence. Respondents also described the birth process as sometimes impersonal with unnecessary interventions performed too often; a process that should not be feared or intervened with unless medically indicated. The second question is as follows: *Complete the following statement. According to my beliefs related to birth practice, my role as an IP nurse in the*

birth process is. Common responses to beliefs related to the role of the IP nurse in the birth process included support and advocacy for patients and families, provision of a safe environment, and positive, supportive experience. Other respondents described providing comfort and encouragement, as well as being a protector from unnecessary intervention.

Summary

Electronic consent was obtained through Qualtrics before each respondent's participation in the survey. The research protocol that was approved by the hospital Research Oversight Committee and The University of Southern Mississippi Internal Review Board was directly followed. The objectives for the doctoral project and the timeline were met as outlined in Chapter II. The confidentiality of each participant was maintained throughout the steps of the project. Descriptive data was collected and reported. Interpretation of the data and recommendations for the patient safety bundle *Safe Reduction of Primary Cesarean Births: Supporting Intended Vaginal Births* (2015) are proposed in the next chapter.

CHAPTER IV – DISCUSSION

Summary

The results of the IPNBBP survey are designed to answer the proposed question: Do IP nurses in labor and delivery have birth beliefs that support medicalized birth or normal birth? The target population was recruited from the 36 registered nurses who worked in the labor and delivery unit at a regional hospital in the Southeastern United States. The total response rate was 80.5% (n=29), and the completed survey response rate was 75% (n=27). The response rate for all completed surveys from the population was a key strength of the data. The overall survey results illustrate the aggregate group of respondent nurses' birth beliefs was aligned with normal birth practices at a rate of 93% (n=25). Respondents who reported having birth beliefs that aligned with medicalized birth were close to the cut off between medicalized and normal birth practices. The sub-scale results for medicalized birth illustrate all nurse's beliefs aligned with normal birth practices. The sub-scale results for normal birth indicate similar scores to the overall aggregate scores.

Descriptive responses for the open-ended question about the birth process elicited responses of birth as a normal, natural process that needs minimal intervention. One respondent stated the normal process of birth should not have the goal of being expedited for the convenience of the providers. The open-ended question about the role of the IP nurse during the birth process revealed roles of providing safety, support, choice, and advocacy for the mother and family, and protector from unnecessary medical interventions. No responses indicated fear of the birth process, and two respondents addressed their preparedness for and recognition of when intervention is necessary.

The IPNBBP survey results indicate that IP nurses' beliefs related to birth practice support a culture of normal birth. The results serve as a foundation for readiness of the nurses to successfully learn new skills and improve their knowledge to value, promote, and support normal physiologic birth. Nurse education and skills training that focuses on non-pharmacologic approaches to support intended vaginal birth are likely to be successful. Nurses are ready to implement the patient safety bundle *Safe Reduction of Primary Cesarean Births: Supporting Intended Vaginal Births* (2015).

According to the Theory of Planned Behavior, the more favorable the attitude and norms, the more likely the individual is to have an intention to perform the behavior. The results of the survey and project echo individual nurse intentions to support normal physiologic birth and intended vaginal birth. The results illustrate the readiness of the nursing culture to successfully learn new skills and improve their knowledge. Nurse education and skills training that focuses on non-pharmacologic approaches to support intended vaginal birth are very likely to be successful because the culture supports the approaches. Gaining knowledge and skills can lead to nursing interventions and options for supporting patients that can decrease unnecessary interventions and lead to the reduction of unnecessary cesarean birth.

Limitations

The first domain in the *Safe Reduction of Primary Cesarean Births: Supporting Intended Vaginal Births* (2015) safety bundle is Readiness for every patient, provider, and facility. The domain focuses on building a culture that values, promotes, and supports intended vaginal birth while understanding the risks of unnecessary cesarean birth. It also focuses on engaging patients in decision-making about normal birth and utilizing skills

and knowledge training for providers to optimize support for a vaginal birth. The project addressed the largest provider base in the regional hospital labor and delivery unit but was limited to one discipline, nursing. The physician culture should be explored to establish if it also aligns with readiness for implementing the safety bundle. At least one physician champion will be necessary to move forward with the project. Administrative, nursing, and physician collaborative representation is necessary to move the project forward. Another limitation of the project is the lack of transparency of the hospital in collecting and sharing cesarean data. Assessing the effectiveness of the implementation of the safety bundle can be enhanced by making related data readily available and transparent. Patients and families should be engaged and educated about normal physiologic birth and shared decision-making. Patient education to support normal physiologic birth is occurring in the labor and delivery unit as part of the Baby-Friendly Hospital Initiative. However, the information is limited because education only begins when the patient enters the hospital on admission for labor and/or birth. Patient and family education should begin during the prenatal period, or earlier. All stakeholders need to be engaged to optimize the patient safety bundle and tools for implementing change.

Implications for Future Practice

In the future, the survey may be replicated, with permission from the tool author, in other hospital labor and delivery settings for similar reasons. The results of the project may help guide choices for use of optional demographic data in the future. Additional questions about the frequency of medical interventions and non-pharmacologic nursing interventions will provide greater knowledge for formulating education and skills

training. The open-ended questions could be utilized for future marketing strategies and for a campaign to educate women and families in the community for them to meet the Readiness domain. Education pamphlets for patients could be distributed in the labor and delivery unit, clinics, and community centers.

Recommendations

Approximately half of the IP nurse respondents were younger than 40 years of age and more than half of respondents reported having less than 6 years of IP experience. All respondents self-identified as female and almost 90% self-identified as Caucasian/White. The information could be helpful for human resources recruitment efforts designated to grow a diverse staff with a balance of experienced and novice nurses. Understanding the breadth of IP experience on each shift and scheduling staff with a mixed level of experience could support optimal patient safety and facilitate learning for less experienced nurses in labor and delivery. The information may aid managerial scheduling choices, as well as current efforts for continuing education for staff.

Most respondents who reported a personal birth experience had a positive experience. Approximately one in three nurses had personal experience with a cesarean birth. The rate was reflective of current national and state cesarean rates. The information may indicate that cesarean birth alone is not dispositive as a driver for respondents reporting a negative birth experience. The data is also clear that nurses who had a cesarean birth are most likely supportive of normal physiologic birth.

Two-thirds of survey respondents reported holding a Bachelor of Science in nursing and most reported holding at least one certification related to their area of

expertise. All respondents reported having attended at least one continuing education event related to IP nursing in the past two years. The responses indicate that education and continuing education are valued by the population of nurses in their area of expertise. All respondents estimated that continuous EFM is used for greater than 75% of women in labor. Routine care in the labor and delivery unit consists of either intermittent or continuous EFM for all women with a viable fetus. All respondents are required to interpret EFM as a routine practice in their job. Further information regarding access, cost, and support for EFM certification would be useful for planning efforts to increase the rates.

A recommendation associated with the finding relates to the hospital's recent positive experience with ALSO provider certification. ALSO is an intensive multidisciplinary evidence-based simulation course that prepares providers for obstetric emergencies. The hospital has nurses on staff certified to provide ALSO training and has offered the training twice a year since 2019. ALSO is a valuable course that improves knowledge and confidence when caring for women during an emergency and greater than 40% of respondents have completed the course. However, only 35% of respondents have completed EFM certification training. A goal of 100% of staff certification for EFM and ALSO within one year of hire and certification maintenance is recommended.

Almost all respondents have experience with routine medical interventions used during labor and birth. However, some of the non-pharmacologic interventions for supporting labor and birth such as birth plans, hydrotherapy, water birth experience, open-glottis pushing, and encouraging upright positions is limited. The data collected does not address how often the techniques are utilized or offered to patients. A clearer

understanding of the utilization and offerings of non-pharmacologic interventions by IP nurses would be useful information. National data reflects that women desire options for labor and birth and satisfaction with one's birth experience may depend more on her sense of control over decisions about pain relief rather than her overall pain experience. The information will help plan nursing education and skills training for non-pharmacologic approaches for supporting intended vaginal birth.

Respondents report that the hospital electronic medical record has a designated location to easily record non-technical and supportive interventions performed by the IP nurse. Access for nurses to easily chart non-pharmacologic interventions in the electronic medical record is a helpful tool and is evidence of support within the hospital system for normal birth. The hospital is making efforts to achieve Baby-Friendly Hospital designation. The initiative supports physiologic birth and adaptation for mothers and babies. The efforts align with the proposed safety bundle *Safe Reduction of Primary Cesarean Births: Supporting Intended Vaginal Births* (2015).

Although respondents reported some experience with family physicians, certified nurse midwives, certified professional midwives, and lay midwives, the hospital currently only has obstetricians as birth attendants. The results may indicate that some nurses have had experience in the past at the institution or in other settings with the types of birth attendants. But, on the other hand, the nurses may not be familiar with the different types of midwives since there are few practicing midwives in Mississippi. A recommendation is that the hospital considers the evidence-based benefits of nurse-midwifery care in the hospital setting for decreasing unnecessary interventions, improving overall outcomes, and decreasing cost.

Overall the participant's responses indicate a lack of familiarity with the hospital's designation as a regional not-for-profit Level II Trauma Center. The data may reflect that nurses are not local to the area, or the information was not provided during their hospital orientation, or it is not pertinent information to their specific job. However, participant's responses indicate a realistic view of the correct range for the annual birth rate at the hospital and almost half of the respondents correctly identified the range for the cesarean birth rate. About one-fifth of respondents overestimated and approximately 10% underestimated the rate of cesarean birth. Nurses should have a clear and accurate understanding of the cesarean birth rates in the hospital to better understand the culture shift and efforts that will be forthcoming to reduce unnecessary cesarean birth.

Implementation of Patient Safety Bundle

The National Partnership for Maternity Safety supports a data-driven approach to quality improvement initiatives that support maternity safety, including the safe reduction of unnecessary cesarean birth. The group developed a patient safety bundle with the Alliance for Innovation on Maternal Care (AIM). The initiative has many tools adopted from the California Perinatal Quality Care Collaborative, a group that has proven the tools can impact cesarean rates and improve maternal outcomes (Main et al., 2019). *Safe Reduction of Primary Cesarean Births: Supporting Intended Vaginal Birth*s (2015) outlines critical practices for implementation in maternity units across the United States. The safety bundle is systemized and training on it is available online at no cost.

Safety Bundle Tools

All staff and providers who work in labor and delivery should complete the five AIM e-modules education for the safety bundle. AIM e-modules are ten to thirty minutes

long and include an introduction to the bundle, and the four phases, Readiness, Recognition/Prevention, Response, and Reporting/Systems Learning. The five audio/video presentations are available in the hospital Healthstream education system. Chart reviews will be necessary to evaluate which protocols from the toolkit to implement. The American College of Obstetricians and Gynecologists (ACOG) has an Audit Worksheet for Consistency with ACOG Guidelines for Diagnosis of Labor Dystocia or Failed Induction (Appendix H) that is included in the AIM safety bundle. Utilizing the worksheet will help to establish inconsistencies and gaps in recommended ACOG guidelines for labor. This worksheet is an excellent starting point for developing a plan of action for implementation of the second domain, Recognition/Prevention.

Recommendations: Nursing Education

Regarding the first domain of the safety bundle, *Readiness*, a recommendation is to develop a workshop for nurses to gain skills in providing non-pharmacologic approaches for supporting intended vaginal birth. The evidence-based workshop should include non-pharmacologic comfort measures and interventions for labor dystocia and fetal malpositions. Skills and knowledge to provide patients with emotional support, coping mechanisms, maternal positioning and movement, acupressure points, massage, aromatherapy, heat/cold therapy, and hydrotherapy should be included in the curriculum. The development of a two-hour hands-on workshop designed to meet the educational needs of the IP nurses on the unit is recommended. The workshop should include proper equipment use and safety for utilizing labor tools. A series of ten-minute case studies may be developed from the workshop materials for use during the hospital annual requirements unit-specific skills check-off.

Recommendations: Equipment and Patient Education

The hospital labor and delivery unit have some helpful equipment (specifically birth balls, peanut balls, two wireless EFM units) to facilitate maternal position changes during labor. It is recommended that additional equipment to support movement, positioning, and comfort measures be available on the unit. Birth bars, birth stools and access to tubs or showers for hydrotherapy can be valuable tools. Additional wireless EFM units would be optimal and assist more women to be mobile and not tethered to the bed. Laminated, multiuse pictographs illustrating maternal positions and non-pharmacologic comfort measures should be located in each labor room for patients and providers. The hospital should engage patients with education on all pain management options, including non-pharmacologic methods for coping with labor and supporting intended vaginal birth. The education should reach the community at large, provider offices/clinics, and patients upon admission to the hospital labor and delivery unit.

Recommendations: Develop Task Force

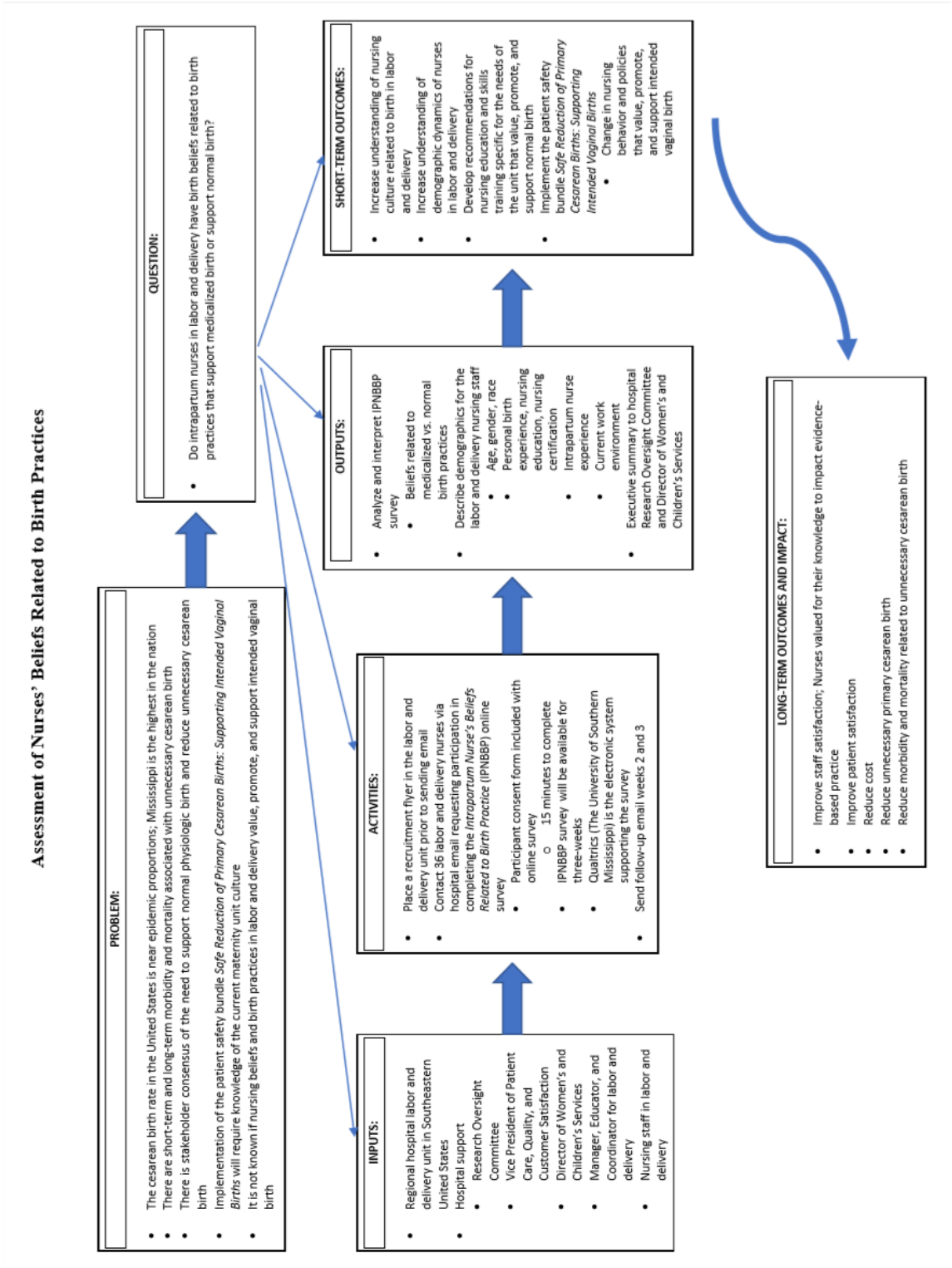
Recommendations to further implement the patient safety bundle include developing a multidisciplinary task force for *Safe Reduction of Primary Cesarean Births: Supporting Intended Vaginal Births* (2015). Members of the task force will need to be champions for change representing administration (patient safety or risk management), nursing, and physicians who meet monthly. One of the representatives should support data collection that establishes the current overall cesarean, primary cesarean, and NTSV birth rates for the hospital. The Joint Commission will begin publicly reporting hospitals with consistently high cesarean birth rates by July 1, 2020. The designated "high rate" will be based on the individual hospital's rate on the Perinatal Care Cesarean Birth

measure (PC-02) that specifically targets the low-risk population of women having their first birth (NTSV rate). The task force will need to establish a timeline to begin collecting data for the hospital and reporting results to providers and staff, as well as perform chart reviews. Non-blinding data collection by individual physicians and a plan for reporting the data should be included in the planning process.

Conclusion

Cesarean birth can be lifesaving and has benefits to mother and baby when a vaginal birth is not a safe option. A culture shift that views unnecessary cesarean birth as a preventable cause of maternal morbidity and mortality is necessary to impact change. The IPNBBP survey results have established that the nursing culture in the regional hospital is supportive of normal birth practices. Education and training efforts that focus on normal birth and support for intended vaginal birth are very likely to be successful. Understanding the relationship of beliefs related to birth practices is key to predicting future intentions of care. A maternity unit environment that is ready to implement changes in education and policies will ultimately impact unnecessary cesarean births.

APPENDIX A– Logic Model



APPENDIX B– Author Permission to Use IPNBBP Survey

From: Ellise Adams <eda0001@uah.edu>
Sent: Tuesday, April 16, 2019 2:33 PM
To: Janice Scaggs
Subject: Re: Request permission to use The Intrapartum Nurse's Beliefs Related to Birth Practice instrument

Janice,
Thank you for your interest in the IPNBBP and for contacting me about using it. You have my permission to use it with the following stipulations:

- Acknowledgment of authorship remains on the instrument
- Citation of one of the two publications authored by me re. IPNBBP in any publications generated from your research
- to provide the validation and reliability statistics gathered during your study to ellise.adams@uah.edu.

Attached is a pdf copy of the instrument and guidelines for use. I wish you well in your study.
Dr. Ellise Adams

Ellise D. Adams PhD, CNM
Associate Professor, College of Nursing
Doctor of Nursing Practice Program Coordinator
The University of Alabama in Huntsville
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APPENDIX C– Original IPNBBP Survey and Scoring

THE INTRAPARTUM NURSE'S BELIEFS RELATED TO BIRTH PRACTICE

Ellise D. Adams PhD, CNM

The Intrapartum Nurse's Beliefs Related to Birth Practice (IPNBBP) was designed to be an online instrument to measure the concept: birth beliefs related to birth practice of the intrapartum (IP) nurse. The IPNBBP consists of 28 items quantitative items and 2 qualitative items. Sub-Scales identify 11 items measuring the concept: birth beliefs related to medicalized birth and 17 items measuring the concept: birth beliefs related to normal birth. Determining the beliefs of IP nurses can assist administrators, educators and researchers to identify connections between beliefs, birth practice and birth outcomes.

The IPNBBP was patterned after the *Labor Support Questionnaire* (Sauls, 2004). Development of the IPNBBP occurred through concept analysis (Adams, 2012), domain identification, item generation and implementation of the content validity index (Adams, 2012; Adams & Sauls, 2014a). The psychometric properties of the IPNBBP (Section 2) have been measured through the internal consistency method, assessment of convergence validity with the *Labor Support Questionnaire*, and through factor analysis to measure construct validity (Adams, 2012; Adams & Sauls, 2014b).

Section 1:

Suggested Demographics

My age is:_____

My gender is:_____Female_____Male

My race is: _____White/Caucasian_____Black/African American_____Hispanic/Latino
_____American Indian/Alaskan Native_____Pacific Islander_____Two or more races
_____Other

Select all that apply, I have given birth:
_____vaginally_____by cesarean_____with forceps_____with vacuum extraction_____NA

Select all that apply, I have given birth:
_____at home_____at a hospital_____in a freestanding birth center_____NA_____other (please specify)_____

Select all that apply, I would describe my birth experiences as:
_____Positive_____negative_____no opinion_____NA_____other (please specify)_____
_____

Nursing Education and Certification

Select all that apply. I have completed the following degrees:
_____Doctor of Philosophy in Nursing_____Doctor of Nursing Science_____Nurse Doctorate
_____Doctor of Nursing Practice_____Master of Science in Nursing_____Master in Nursing
_____Bachelor of Science in Nursing_____Associate Degree of Nursing_____Diploma of Nursing
_____Other (please specify)_____

Select all that apply. I have the following certifications:
_____Electronic Fetal Monitoring_____In-patient intrapartum nursing_____Childbirth Education
_____Nurse-Midwifery_____Certified Nurse Specialist_____Nurse Practitioner
_____Doula_____NA_____Other (please specify)_____

Intrapartum Nurse Experience

The total number of years I have worked as an intrapartum nurse is:_____

Select all that apply. In my career, I have had experience with the following:
_____Elective inductions of labor_____augmented labors_____cesarean birth
_____Elective cesarean birth (no medical indication)_____epidural anesthesia
_____Unmedicated vaginal birth_____forceps delivery_____vacuum extraction
_____Episiotomy_____ambulation for labor_____continuous fetal monitoring
_____Intermittent fetal monitoring_____laboring down_____birth plans
_____Use of closed glottis pushing_____use of open glottis pushing_____doulas
_____Use of breathing and relaxation techniques_____hydrotherapy_____water birth
_____Encouraging upright positioning during labor and birth_____certified nurse-midwives
_____Certified midwives_____certified professional midwives_____lay midwives
_____Obstetricians_____family physicians_____obstetric medical students and residents
_____Freestanding birth centers_____home birth

I have attended at least one continuing education event related to intrapartum nursing in the last 2 years.
____Yes____No

Current Work Environment

Select all that apply. Type of hospital where I am currently employed is:
_____community_____private_____magnet_____level 1_____level 2_____level 3
_____other (please specify)_____
_____

This hospital would be considered:
____Urban____Rural

Select all that apply. Type of birth attendants who practice at this hospital:
_____obstetricians_____family practice physicians_____medical residents_____medical students_____certified nurse-midwives_____certified midwives_____other (please specify)___
_____

Annual number of births:
_____Up to 500_____501-1000_____1001 to 2000_____greater than 2000

Estimated percentage of cesarean births per month:
_____Below 10%_____10-20%_____21-30%_____31-40%_____41-50%_____greater than 51%

Estimated percentage of elective inductions (not medically indicated) per month:
_____Below 10%_____10-20%_____21-30%_____31-40%_____41-50%_____greater than 51%

Estimated percentage of patients who use epidurals for pain relief
_____0-20%_____21-40%_____41-60%_____61-80%_____greater than 80%

Estimated percentage of patients who use continuous fetal monitoring (for at least one-half of their labor):
_____0-30%_____31-70%_____greater than 70%

The patient documentation method used in our facility includes a mechanism for charting supportive, non-technical interventions used for patient comfort:
____Yes____No

The typical Nurse/Patient staffing ratio used in our facility is:
____1 to 1____1 to 2____1 to 3____1 to 4____1 to greater than 4

THE INTRAPARTUM NURSE'S BELIEFS RELATED TO BIRTH PRACTICE

Section 2:

Review the following statements related to IP nursing. Think about your individual practice. Choose the number associated with each item that most closely matches your current beliefs related to birth practice on the scale of 1 – 6: 1 = strongly differs from my beliefs related to birth practice to 6 = strongly aligns with my beliefs related to birth practice.

	Strongly Differs					Strongly Aligns
1. When I think about my beliefs related to birth practice, I believe that: To recognize uterine hyperstimulation/tachsystole the IP nurse must use an intrauterine pressure catheter.	1	2	3	4	5	6
2. When I think about my beliefs related to birth practice, I believe that: Birth environments should provide a homelike environment to optimize privacy and comfort for the laboring woman and her family.	1	2	3	4	5	6
3. When I think about my beliefs related to birth practice, I believe that: Maternal pushing during the second stage requires directions from the IP nurse including counting to 10 during each push.	1	2	3	4	5	6
4. When I think about my beliefs related to birth practice, I believe that: Certified nurse-midwives are appropriate birth practitioners for low-risk women.	1	2	3	4	5	6
5. When I think about my beliefs related to birth practice, I believe that: Continuous fetal monitoring is a standard of care that is appropriate for use with all laboring women.	1	2	3	4	5	6
6. When I think about my beliefs related to birth practice, I believe that: Intravenous fluids are necessary for the laboring woman.	1	2	3	4	5	6
7. When I think about my beliefs related to birth practice, I believe that: Most pregnancies are considered low-risk at the start of labor.	1	2	3	4	5	6
8. When I think about my beliefs related to birth practice, I believe that: Pain in labor represents a physiological process.	1	2	3	4	5	6
9. When I think about my beliefs related to birth practice, I believe that: Most routine interventions such as continuous fetal monitoring are unnecessary to promote the health of the laboring woman.	1	2	3	4	5	6
10. When I think about my beliefs related to birth practice, I believe that: Most routine interventions such as indwelling	1	2	3	4	5	6

urinary catheters are unnecessary to promote the health of the laboring woman.						
11. When I think about my beliefs related to birth practice, I believe that: Ice chips provide laboring women with necessary oral hydration.	1	2	3	4	5	6
12. When I think about my beliefs related to birth practice, I believe that: IP nurses can have a positive effect on birth outcomes.	1	2	3	4	5	6
13. When I think about my beliefs related to birth practice, I believe that: Positions for the first stage of labor that are supported by research and are therefore appropriate for use by the IP nurse include standing, wedging, sitting and hands and knees.	1	2	3	4	5	6
14. When I think about my beliefs related to birth practice, I believe that: Labor support includes physical comfort measures such as providing ice chips, sips of water, wet washcloth and oral hygiene.	1	2	3	4	5	6
15. When I think about my beliefs related to birth practice, I believe that: Breastfeeding is a personal choice and patient teaching about the benefits of breastfeeding might cause emotional distress.	1	2	3	4	5	6
16. When I think about my beliefs related to birth practice, I believe that: Visual focal point, imagery and social conversation are effective methods of distraction appropriate for use in labor.	1	2	3	4	5	6
17. When I think about my beliefs related to birth practice, I believe that: Plotting the progress of labor and comparing to Friedman's curve is necessary to prevent poor birth outcomes.	1	2	3	4	5	6
18. When I think about my beliefs related to birth practice, I believe that: The laboring woman's desires are more important than the care provider.	1	2	3	4	5	6
19. When I think about my beliefs related to birth practice, I believe that: Labor support includes explanations to the client as to what is occurring with the labor process.	1	2	3	4	5	6
20. When I think about my beliefs related to birth practice, I believe that: Hydrotherapy (shower or bath) in labor is a risk to patient safety.	1	2	3	4	5	6
21. When I think about my beliefs related to birth practice, I believe that: Squatting is an appropriate position for second stage of labor.	1	2	3	4	5	6
22. When I think about my beliefs related to birth practice, I believe that: Labor support includes listening and respecting the client's opinion and wishes.	1	2	3	4	5	6

23. When I think about my beliefs related to birth practice, I believe that: When the laboring woman expresses pain, a priority nursing intervention is to prepare for epidural anesthesia.	1	2	3	4	5	6
24. When I think about my beliefs related to birth practice, I believe that: Providing explanations about procedures is a necessary nursing intervention for partners attending labor and birth with the laboring patient.	1	2	3	4	5	6
25. When I think about my beliefs related to birth practice, I believe that: Labor support includes providing reassurance and praise such as telling the client she is doing well or that labor is progressing normally.	1	2	3	4	5	6
26. When I think about my beliefs related to birth practice, I believe that: Effectiveness in IP nursing is mainly related to years of experience.	1	2	3	4	5	6
27. When I think about my beliefs related to birth practice, I believe that: The preferred methods of warming a newborn is radiant heat.	1	2	3	4	5	6
28. When I think about my beliefs related to birth practice, I believe that: Labor support includes ensuring privacy and protecting modesty.	1	2	3	4	5	6

Section 3:

Complete the following statement. According to my beliefs related to birth practice, the birth process is:

Complete the following statement. According to my beliefs related to birth practice, my role as an IP nursing in the birth process is:

Contact information:
Ellise D. Adams PhD, CNM
Ellise.adams@uah.edu
256-824-2442

References

Adams, E. (2012). *The psychometric properties of an instrument measuring the beliefs of intrapartum nurses related to birth practice* (Doctoral dissertation). Retrieved from CINAHL Plus Full Text UMI Order AAI3538778.

Adams, E. & Sauls, D. (2014a). Development of the intrapartum nurses' beliefs related to birth practice scale. *Journal of Nursing Measurement 22*(1), 1-10.

Adams, E. & Sauls, D. (2014b). Reliability and validity of an instrument to measure the beliefs of intrapartum nurses. *Journal of Perinatal and Neonatal Nursing 28*(2), 1-8.

Sauls, D. (2004). The labor support questionnaire: Development and psychometric analysis. *Journal of Nursing Measurement, 12* (2), 123-132.

Scoring

Total scores on the IPNBBP, Section 2 range from 28 to 168. Items indicating medicalized beliefs were reverse scored prior to data analysis. Lower scores more closely align with medicalized beliefs beliefs of the IP nurse and higher scores more closely align with normal birth beliefs of the IP nurse. In Section 3, two open-ended questions allow the IP nurse to express their beliefs related to birth practice in a narrative manner. Data from these open-ended questions may be subjected to theme analysis for interpretation.

Conceptual and Operation Definitions of the Research Variables for the IPNBBP

Variable	Sub-Scale	Conceptual Definition	Operational Definition	Items on the IPNBBP	Scoring
birth beliefs related to birth practice of the IP nurse		The construct of birth beliefs related to birth practice can be conceptually defined as core beliefs held by the IP nurse related to the process of birth and to the type of care women receive during the birth process. These birth beliefs are further conceptualized into two sub-categories: birth beliefs related to medicalized birth and birth beliefs related to normal birth.	The IPBPNP operationalizes birth beliefs related to birth practice of the IP nurse to identify an affinity for birth beliefs related to medicalized birth or birth beliefs related to normal birth. This is accomplished through a series of items ranked on a 6-point Likert scale.	1-28	For scoring, items indicating medicalized birth beliefs must be reversed. The range of possible scores is 28-168. **Interpretation** Higher scores (112-168) indicate a belief system more closely aligned with normal birth. Lower scores (28-111) indicate a belief system more closely aligned with medicalized birth.
	birth beliefs related to medicalized birth	The concept of birth beliefs related to medicalized birth can be conceptually defined as beliefs which consider labor and birth to occur in a clinical environment. These beliefs consider it necessary for labor and birth to be continually monitored through technological means and that these technological means are designed to optimize the work	The IPBPNP operationalizes the Birth Beliefs related to medicalized birth by determining the IP nurse's birth beliefs through a series of items ranked on a 6-point Likert scale.	A total of 11 items are associated with birth beliefs related to medicalized birth: 1, 3, 5, 6, 11, 15, 17, 20, 23, 26, 27	For scoring, items indicating medicalized birth beliefs must be reversed. For the sub- scale of birth beliefs related to medicalized birth, a score ranging from 11-66 is ***possible***. **Interpretation** Reverse scores, for these 11 items, between 11-33 will indicate that the IP nurse's birth beliefs are more closely

		of the healthcare provider and not necessarily the work of the woman or her family. Birth is viewed as a pathological process where complications can be catastrophic and interventions must be implemented to prevent them.			associated with the elements of medicalized birth.
	birth beliefs related to NORMAL BIRTH	The concept of birth beliefs related to NB can be defined as beliefs which consider labor and birth to be a physiological life event that is unique to each laboring woman. The process is not bound by timelines and parameters. The birth may occur at home, in a freestanding birth center or in a hospital. It occurs spontaneously after the completed 37th week of pregnancy and is not associated with any risk factors. Care may be provided by a variety of birth attendants but the	The IPBBNP operationalizes the birth beliefs related to normal birth by determining the IP nurse's birth beliefs through a series of items ranked on a 6-point Likert scale.	A total of 17 items are associated with birth beliefs related to normal birth: 2, 4, 7, 8, 9, 10, 12, 13, 14, 16, 18, 19, 21, 22, 24, 25, 28	For the sub-scale of birth beliefs related to normal birth, a score ranging from 17-102 is possible. **Interpretation** Scores, for these 17 items, ranging from 68-102 will indicate that the IP nurse's birth beliefs are more closely associated with the elements of normal birth.

		laboring woman is thought to possess the knowledge and power necessary to guide the care. The birth environment is supportive of normal birth practices. This environment includes both supportive administrators and colleagues of the IP nurse. The IP nurse who provides care during a NORMAL BIRTH is trusting of the birth process, provides patient advocacy, is respectfully assertive, and has high self-efficacy related to the interventions necessary to promote normal birth. Birth practices associated with normal birth provide physical, mental, emotional, and social support. Interventions, if necessary, are not technologically based. Liberal use of labor support techniques dictate that the IP nurse			

		spends the majority of time at the patient's bedside.			

APPENDIX D– Consent and IPNBBP Survey as Appears Online in Qualtrics

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Final IP Nurse's Beliefs Related to Birth Practice

Start of Block: Consent for Survey

Q1 **Intrapartum Nurse's Beliefs Related to Birth Practice Consent Form** You are invited to participate in a study being conducted by Janice Scaggs, a candidate for the Doctor of Nursing Practice at The University of Southern Mississippi. The purpose of the study is to assess the nursing culture in labor and delivery as it relates to nursing beliefs and birth practices. Participation should take approximately fifteen minutes to complete the online survey.

PARTICIPATION & INSTRUCTIONS

Your participation in this survey is voluntary. You may refuse to take part in the research or exit the survey at any time without penalty. This is an individual survey. Answer all questions to the best of your ability without influence from others. There are no correct or incorrect answers.

BENEFITS & RISKS

You will receive no direct benefits from participating in this research study. However, your responses may help leadership better understand the maternity nursing culture on the unit and could influence future education and training activities that improve patient outcomes. There are no foreseeable risks involved in participating in this study other than

there is the risk that you may find some of the questions to be sensitive or illicit emotional discomfort related to your personal birth experience or nursing experience. If you do experience emotional discomfort and desire counseling, please contact the hospital Employee Assistance Program at (800) 925-5327.

CONFIDENTIALITY

Your survey answers will be stored initially with Qualtrics in a password protected electronic format via The University of Southern Mississippi. Data will later be downloaded and stored and will be password protected. Completed surveys will not be downloaded. Name, e-mail address, and IP address identifiers will not be collected. Confidentiality will be maintained. All survey responses will be deleted six months after all graduation requirements have been met.

CONTACT

If you have further questions or concerns about your rights as a participant in this study, contact the University of Southern Mississippi Office of Research Compliance at Samuel.Bruton@usm.edu. If you have questions concerning the study, contact the principal investigator Janice Scaggs, at (770) 883-9038, or by email at Janice.Scaggs@usm.edu, or USM Faculty Advisor Dr. Cathy Hughes at Cathy.Hughes@usm.edu.

ELECTRONIC CONSENT:

Please select your choice below. You may print a copy of this consent form for your records. Clicking on the "Agree" button indicates that: · You have read the above information · You voluntarily agree to participate · You are 18 years of age or

older Clicking on the "Disagree" button indicates that you do not give your consent and the survey will end.

- ○ Agree
- ○ Disagree

End of Block: Consent for Survey

Start of Block: Demographics

Q2 My age is:

- ○ 20 years or less
- ○ 21-29 years
- ○ 30-39 years
- ○ 40-49 years
- ○ 50-59 years
- ○ 60-69 years
- ○ 70-79 years
- ○ 80 years or more

Q3 My gender is:

- ○ Male
- ○ Female
- ○ Other _____

Q4 My race is:

- ○ Other (please specify) _____
- ○ Two or more races
- ○ Pacific Islander
- ○ American Indian/Alaskan Native
- ○ Hispanic/Latino
- ○ Black/African American
- ○ White/Caucasian

Q5 Select all that apply. I have given birth:

- ☐ vaginally
- ☐ by cesarean
- ☐ with forceps
- ☐ with vacuum extraction
- ☐ N/A

Q6 Select all that apply. I would describe my birth experience as:

- ☐ positive
- ☐ negative
- ☐ no opinion
- ☐ N/A
- ☐ Other (please specify) _____

End of Block: Demographics

Start of Block: Nursing Education and Certification

Q7 Select all that apply. I have completed the following degrees:

- [ ] Diploma of Nursing
- [ ] Associate Degree of Nursing
- [ ] Bachelor of Science in Nursing
- [ ] Bachelor's in field other than nursing
- [ ] Master of Science in Nursing
- [ ] Doctor of Nursing Practice
- [ ] Doctor of Philosophy in Nursing
- [ ] Doctor in Nursing Science
- [ ] Other (please specify) _____

Q8 Select all that apply. I have the following certifications:

- [ ] Electronic Fetal Monitoring (C-EFM)
- [ ] Inpatient Obstetric nursing (RNC-OB)
- [ ] Advanced Life Support in Obstetrics (ALSO)
- [ ] Childbirth Educator (If yes, type in certifying body) _____
- [ ] Doula (If yes, type in certifying body) _____
- [ ] Certified Nurse Specialist
- [ ] Nurse Practitioner (If yes, type in certifying body) _____
- [ ] Certified Nurse-Midwife
- [ ] Other certification (please specify) _____
- [ ] None

End of Block: Nursing Education and Certification

Start of Block: Intrapartum Nurse Experience

Q10 The total number of years I have worked as an intrapartum nurse is:

- ○ 0-2 years
- ○ 3-4 years
- ○ 5-6 years
- ○ 7-8 years
- ○ 9-10 years
- ○ 11-12 years
- ○ 13-14 years
- ○ 15-16 years
- ○ 17-18 years
- ○ 19-20 years
- ○ 21-22 years
- ○ 23-24 years
- ○ 25-30 years
- ○ greater than 30 years

Q11 Select all that apply. In my career, I have had experience with the following:

- [ ] elective inductions of labor (no medical indication)
- [ ] augmented labors
- [ ] cesarean birth
- [ ] elective cesarean birth (no medical indication)
- [ ] epidural anesthesia
- [ ] unmedicated vaginal birth
- [ ] forceps delivery
- [ ] vacuum extraction
- [ ] episiotomy
- [ ] ambulation for labor
- [ ] continuous fetal monitoring
- [ ] intermittent fetal monitoring
- [ ] laboring down
- [ ] birth plans
- [ ] use of closed glottis pushing
- [ ] use of open glottis pushing

- [ ] doulas
- [ ] use of breathing and relaxation techniques
- [ ] hydrotherapy
- [ ] water birth
- [ ] encouraging upright positioning during labor and birth
- [ ] certified nurse-midwives
- [ ] certified midwives
- [ ] certified professional midwives
- [ ] lay midwives
- [ ] obstetricians
- [ ] family physicians
- [ ] obstetric medical students and residents
- [ ] free-standing birth centers
- [ ] home birth

Q12 I have attended at least one continuing education event related to intrapartum nursing in the last two years.

- ○ yes
- ○ no

End of Block: Intrapartum Nurse Experience

Start of Block: Current Work Environment

Q13 Select all that apply. Type of hospital where I am currently employed is:

- ☐ community
- ☐ private
- ☐ magnet
- ☐ level 1
- ☐ level 2
- ☐ level 3
- ☐ other (please specify) _____

Q14 The hospital would be considered:

- ○ urban
- ○ rural
- ○ rural critical access
- ○ other (please specify) _____

Q15 Select all that apply. Type of birth attendants who practice at this hospital:

- ☐ obstetricians
- ☐ family practice physicians
- ☐ medical residents
- ☐ medical students
- ☐ certified nurse-midwives
- ☐ certified midwives
- ☐ other (please specify) _____

Q16 Annual number of births:

- ○ Up to 500
- ○ 501-1000
- ○ 1001-2000
- ○ greater than 2000

Q17 Estimated percentage of cesarean births per month:

- ○ below 10%
- ○ 10-20%
- ○ 21-30%
- ○ 31-40%
- ○ 41-50%
- ○ greater than 51%

Q18 Estimated percentage of elective inductions (not medically indicated) per month:

- ○ below 10%
- ○ 10-20%
- ○ 21-30%
- ○ 31-40%
- ○ 41-50%
- ○ greater than 51%

Q19 Estimated percentage of patients who use epidurals for pain relief:

- ○ 0-20%
- ○ 21-40%
- ○ 41-60%
- ○ 61-80%
- ○ greater than 80%

Q20 Estimated percentage of patients who use continuous fetal monitoring (for at least one-half of their labor):

- ○ 0-30%
- ○ 31-70%
- ○ greater than 70%

Q21 The patient documentation method used in our facility includes a mechanism for charting supportive, non-technical interventions used for patient comfort:

- ○ yes
- ○ No

Q22 The typical nurse/patient staffing ratio used in our facility is:

- ○ 1 to 1
- ○ 1 to 2
- ○ 1 to 3
- ○ 1 to 4
- ○ 1 to greater than 4

End of Block: Current Work Environment

Start of Block: Survey 1-7 of 28

Q23-Q26 (1-7, 8-14, 15-21, 22-28) Review the following statements related to IP nursing. Think about your individual practice. Choose the number associated with each item that most closely matches your current beliefs

related to birth practice on the scale of 1-6: **1 = strongly differs** from my beliefs related to birth practices to **6 = strongly aligns** with my beliefs related to birth practice.

	Strongly Differs 1	2	3	4	5	Strongly Aligns 6
1. When I think about my beliefs related to birth practice, I believe that: To recognize uterine hyperstimulation/ tachysystole the intrapartum nurse must use an intrauterine pressure catheter.	○	○	○	○	○	○
2. When I think about my beliefs related to birth practice, I believe that: Birth environments should provide a homelike environment to optimize privacy and comfort for the laboring woman and her family.	○	○	○	○	○	○
3. When I think about my beliefs related to birth practice, I believe that: Maternal pushing during the second stage requires directions from the intrapartum nurse including counting to 10 during each push.	○	○	○	○	○	○

4. When I think about my beliefs related to birth practice, I believe that: Certified nurse-midwives are appropriate birth practitioners for low-risk women.	○	○	○	○	○	○
5. When I think about my beliefs related to birth practice, I believe that: Continuous fetal monitoring is a standard of care that is appropriate for use with all laboring women.	○	○	○	○	○	○
6. When I think about my beliefs related to birth practice, I believe that: Intravenous fluids are necessary for the laboring woman.	○	○	○	○	○	○
7. When I think about my beliefs related to birth practice, I believe that: Most pregnancies are considered low-risk at the start of labor.	○	○	○	○	○	○

End of Block: Survey 1-7 of 28

Start of Block: Survey 8-14 of 28

	Strongly Differs 1	2	3	4	5	Strongly Aligns 6
8. When I think about my beliefs related to birth practice, I believe that: Pain in labor represents a physiological process.	○	○	○	○	○	○
9. When I think about my beliefs related to birth practice, I believe that: Most routine interventions such as continuous fetal monitoring are necessary to promote the health of the laboring woman.	○	○	○	○	○	○
10. When I think about my beliefs related to birth practice, I believe that: Most routine interventions such as indwelling urinary catheters are unnecessary to promote the health of the laboring woman.	○	○	○	○	○	○

11. When I think about my beliefs related to birth practice, I believe that: Ice chips provide laboring women with necessary oral hydration.	○	○	○	○	○	○
12. When I think about my beliefs related to birth practice, I believe that: Intrapartum nurses can have a positive effect on birth outcomes.	○	○	○	○	○	○
13. When I think about my beliefs related to birth practice, I believe that: Positions for the first stage of labor that are supported by research and are therefore appropriate for use by the intrapartum nurse include standing, wedging (use of wedge/pillows for positioning), sitting and hands and knees.	○	○	○	○	○	○

14. When I think about my beliefs related to birth practice, I believe that: Labor support includes physical comfort measures such as providing ice chips, sips of water, wet washcloth and oral hygiene.	○	○	○	○	○	○

	Strongly Differs 1	2	3	4	5	Strongly Aligns 6
15. When I think about my beliefs related to birth practice, I believe that: Breastfeeding is a personal choice and patient teaching about the benefits of breastfeeding might cause emotional distress.	○	○	○	○	○	○
16. When I think about my beliefs related to birth practice, I believe that: Visual focal point, imagery, and social conversation are effective methods of distraction appropriate for use in labor.	○	○	○	○	○	○

17. When I think about my beliefs related to birth practice, I believe that: Plotting the progress of labor and comparing it to Friedman's curve is necessary to prevent poor birth outcomes.	○	○	○	○	○	○
18. When I think about my beliefs related to birth practice, I believe that: The laboring woman's desires are more important than the care provider.	○	○	○	○	○	○
19. When I think about my beliefs related to birth practice, I believe that: Labor support includes explanations to the client as to what is occurring with the labor process.	○	○	○	○	○	○

20. When I think about my beliefs related to birth practice, I believe that: Hydrotherapy (shower or bath) in labor is a risk to patient safety.	○	○	○	○	○	○
21. When I think about my beliefs related to birth practice, I believe that: Squatting is an appropriate position for the second stage of labor.	○	○	○	○	○	○

End of Block: Survey 15-21 of 28

Start of Block: Survey 22-28 of 28	Strongly Differs 1	2	3	4	5	Strongly Aligns 6
22. When I think about my beliefs related to birth practice, I believe that: Labor support includes listening and respecting the client's opinion and wishes.	○	○	○	○	○	○
23. When I think about my beliefs related to birth practice, I believe that: When the laboring woman expresses pain, a priority nursing intervention is to prepare for epidural anesthesia.	○	○	○	○	○	○

24. When I think about my beliefs related to birth practice, I believe that: Providing explanations about procedures is a necessary nursing intervention for partners attending labor and birth with the laboring patient.	○	○	○	○	○	○
25. When I think about my beliefs related to birth practice, I believe that: Labor support includes providing reassurance and praise such as telling the client she is doing well or that labor is progressing normally.	○	○	○	○	○	○
26. When I think about my beliefs related to birth practice, I believe that: Effectiveness in intrapartum nurses nursing is mainly related to years of experience.	○	○	○	○	○	○

27. When I think about my beliefs related to birth practice, I believe that: The preferred methods of warming a newborn are radiant heat.	○	○	○	○	○	○
28. When I think about my beliefs related to birth practice, I believe that: Labor support includes ensuring privacy and protecting modesty.	○	○	○	○	○	○

End of Block: Survey 22-28 of 28

Start of Block: Statements

Q28 Complete the following statement. According to my beliefs related to birth practice, the birth process is:

_____

Q29 Complete the following statement. According to my beliefs related to birth practice, my role as an intrapartum nurse in the birth process is:

_____

End of Block: Statements

Start of Block: End of Survey: Acknowledgement

Q28 I would like to acknowledge and thank Dr. Ellise D. Adams for her permission to use *The Intrapartum Nurse's Beliefs Related to Birth Practice* instrument. Dr. Adams is the author of this instrument and all rights are reserved. The author must be contacted for permission to use.

End of Block: End of Survey: Acknowledgement

APPENDIX E – Recruitment Flier

Intrapartum Nurse's Beliefs Related to Birth Practices

Be PART of an important Research Study

- Are you a labor and delivery RN?
- Do you want to contribute to understanding the nursing culture in your unit as it relates to maternity care?

If you answered **YES** to these questions you are **eligible** to participate in this **voluntary** unit survey.

The purpose of the survey is to assess the nursing culture in labor and delivery as it relates to nursing beliefs and birth practices

- **When?** September 30 to October 21, 2019
- **How?** You will receive a link to the survey in your work e-mail
- **Time?** About 15 minutes to complete consent & survey

There is no compensation for your participation, however, your responses may help leadership better understand the maternity nursing culture on the unit and could influence future education and training activities.

This study is being conducted by Janice Scaggs, a candidate for the Doctor of Nursing Practice at The University of Southern Mississippi. You may contact Janice for further questions at Janice.scaggs@usm.edu or 770-883-9038.

APPENDIX F– IPNBBP Survey Section III Question 1

The first open-ended question and responses. *Complete the following statement. According to my beliefs related to birth practice, the birth process is:*

1. “a miracle.
2. “the most exhausting and exhilarating and beautiful phenomenon that women can experience. beautiful.”
“beautiful.”
3.“a natural process and medical intervention should be used sparingly.”
4. “a natural processes and it hurts. it should be done in a hospital to have care available if problems arise.”
5.“keep it as natural as possible while giving patient pertinent information of risks and benefits.”
6. “a life changing experience”
7. “natural.”
8. “natural.”
9. “a difficult and complex process.”
10. “too easily considered unsafe or having stalled and turned to cesarean.”
11. “A natural one.”
12. “natural.”
13. “a natural part of life and has been occurring for many years. It has become so impersonal and technological and is unnecessary.”
14. “amazing process and the most happiest times in a couple's life.”
15. “normal and we do too many interventions which are unnecessary.”
16. “a natural phenomenon we have had for centuries, with plenty of room for improvement medically and emotionally for the patient.”
17. “a natural, physiologic process.”
18. “a normal event that we interfere in far too often.”
19. “a wonderful experience that is natural but can turn to an emergency situation in a moment. Our main goal is for mom and baby to have stay safe and have a viable delivery.”
20. “a complex process that requires skill, knowledge, and competence as an intrapartum nurse”
21. “something shared among a group of people, including M.D., R.N, OB Tech, Patient, Nursery, RT, and all family pt invites into the process. The process is a plan set in place by all involved & is agreed upon by the patient. The goal is always Healthy Mom & Healthy Baby.”
22. “a normal and wonderful experience that we should support and not try to expedite for the convenience of providers.”
23. “a normal, natural and wonderful experience.”
24. “natural process.”
25. “a life changing experience.”

APPENDIX G– IPNBBP Survey Section III Question 2

The second open-ended question and responses. *Complete the following statement. According to my beliefs related to birth practice, my role as an IP nurse in the birth process is:*

1. “to support the mom and her family.”
2. “can potentially make or break a mother's child-birthing experience. Within my power, I want to make every experience the best it can be for them.”
3. “meet patient needs within parameters of safety in practicing medicine.”
4. “to support pts wishes as long as it remains medically healthy.”
5. “to support the mother and family. It is to also for me to monitor the progression of labor to ensure safe outcomes.”
6. “patient and family advocate.”
7. “very important to ensure that new parents have the best experience possible.”
8. “support the laboring mother during the labor process.”
9. “to meet the needs of the patient and ensure a safe environment for the laboring patient as well as meet the requests of the patient for their birth plan.”
10. “support mother and provide education throughout.”
11. “is to assist and support the mother in a safe birth that also aligns with her wishes.”
12. “To assure my patient and family have a good, safe birthing experience.”
13. “mother's choice”
14. “To ensure the patient is comfortable and safe and be positive and happy experience.”
15. “provide support to patient and families with birthing process.”
16. “Educate mom on the labor process and what she will probably experience, then support her and encourage her throughout her labor process.”
17. “key to a successful birth. We are the liaison for the patient in guiding through experience and adapting to the environment.”
18. “to help every woman have a safe and positive birth experience.”
19. “to provide safety and support to the laboring woman and her partner.”
20. “monitor the baby and mother during labor and communicate progress with the MD while also supporting the mother's wishes and emotional needs”
21. “is to advocate, support, and encourage the patient to encourage an outcome of a healthy mom and healthy baby”
22. “Provide comfort, education, & guidance to the Mother & family she chooses to involve in the process. The nurse also makes sure that the entire team is on the same page & made aware of the plan of care & any changes that occur during the process.”
23. “is to support, encourage, maintain safety, relay information to providers, and help orchestrate the whole birth process.”
24. “supporting the couple while caring for the patient as a whole, physically and emotionally. To have a good outcome between baby and mom, safety and support is essential.”
25. “try to the best of my ability to assist the mother in having the birth that she wants, as well as ensure maternal and fetal wellbeing.”

APPENDIX H– Audit Worksheet for Consistency with ACOG Guidelines for Diagnosis of Labor Dystocia or Failed Induction

CMQCC
California Maternal
Quality Care Collaborative

Audit Worksheet for Consistency with ACOG Guidelines for Diagnosis of Labor Dystocia or Failed Induction

Name of Auditor: _____ Audit completed on (date) _____

Directions: Review 20 Nulliparous Term Singleton Vertex Cesarean cases to determine correct use of dystocia diagnosis. Place √ if criteria met in each category.

1				2		3
For diagnosis of Dystocia/Arrest Disorder (all three should be present)				For diagnosis of Failed Induction before 6 cm dilation (both should be present)		For Dx of failed induction after 6 cm dilation (see criteria 1)
Identifier (MRN, Other)	Cervix ≥ 6cm	Membranes ruptured, then	No change x 4 hrs with adequate uterine activity (or 6 hrs on oxytocin w/inadequate uterine activity)	Bishop score ≥ 8 before elective induction	Oxytocin used for a minimum of 12 hours after ROM	

To calculate "percent consistency with ACOG guidelines for diagnosis of labor dystocia or failed induction"-- divide the number of cases that were 100% consistent with guidelines (meaning the cases that checked all boxes) by the number of cases reviewed.

The Implementation Guide for The Toolkit to Support Vaginal Birth and Reduce Primary Cesareans

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APPENDIX I– IRB Approval Letter

IRB-19-420 - Initial: Sacco Committee Letter - Expedited and Full

irb@usm.edu <irb@usm.edu>

Fri 9/6/2019 9:07 AM

To: Cathy Hughes <Cathy.Hughes@usm.edu>; Janice Scaggs <Janice.Scaggs@usm.edu>; Michael Howell <Michael.Howell@usm.edu>; Michaela Donohue <Michaela.Donohue@usm.edu>

Office *of*
Research Integrity

THE UNIVERSITY OF SOUTHERN MISSISSIPPI

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NOTICE OF INSTITUTIONAL REVIEW BOARD ACTION

The project below has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services regulations (45 CFR Part 46), and University Policy to ensure:

- The risks to subjects are minimized and reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered involving risks to subjects must be reported immediately. Problems should be reported to ORI via the Incident template on Cayuse IRB.
- The period of approval is twelve months. An application for renewal must be submitted for projects exceeding twelve months.

PROTOCOL NUMBER: IRB-19-420
PROJECT TITLE: Assessment of Nurses' Beliefs Related to Birth Practices
SCHOOL/PROGRAM: School of LANP
RESEARCHER(S): Janice Scaggs, Cathy Hughes

IRB COMMITTEE ACTION: Approved
CATEGORY: Expedited
7. Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

PERIOD OF APPROVAL: September 6, 2019
Donald Sacco, Ph.D.
Institutional Review Board Chairperson

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